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### Colt Hunting in the New Forest.

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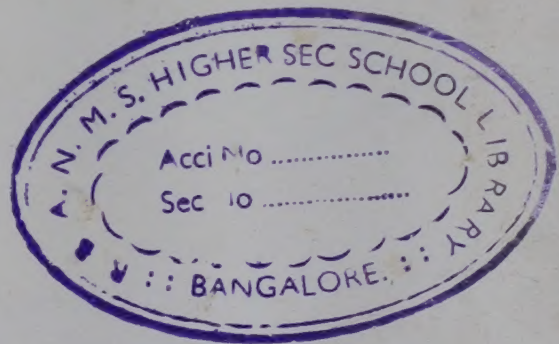
THE ROYAL SCHOOL SERIES

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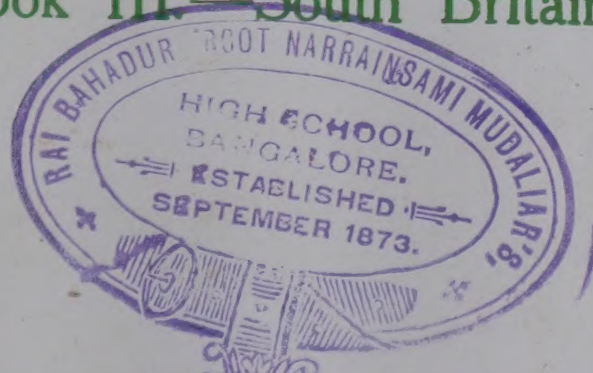
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## Book III.—South Britain



THOMAS NELSON AND SONS

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# CONTENTS.

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<p>1. "The Best of Islands," ... 7</p> <p>2. Our National Blessings, ... 9</p> <p>3. The Encircling Sea, ... 14</p> <p>4. Our First Aeroplane Flight, ... 21</p> <p>5. Our Second Flight, ... 24</p> <p>6. Our Third Flight, ... 30</p> <p>7. Reading the Map, ... 35</p> <p>8. The Story of Our Land, ... 39</p> <p>9. Amongst Our Ancient Mountains, ... 44</p> <p>10. Rainfall and Rivers, ... 47</p> <p>11. The Heart of the Empire, ... 53</p> <p>12. Rambles in London, ... 58</p> <p>13. The "Down Country."—I., ... 64</p> <p>14. The "Down Country."—II., ... 68</p> <p>15. The Thames Valley.—I., ... 71</p> <p>16. The Thames Valley.—II., ... 74</p> <p>17. Devon and the West.—I., ... 79</p> <p>18. Devon and the West.—II., ... 82</p> <p>19. The Marches of Wales, ... 86</p> <p>20. A Little Tour in North Wales, ... 92</p> <p>21. The Heart of England.—I., ... 97</p>	<p>22. The Heart of England.—II., ... 102</p> <p>23. Flats and Fens, ... 105</p> <p>24. The Backbone of England, ... 110</p> <p>25. The Ancient Cities.—I., ... 115</p> <p>26. The Ancient Cities.—II., ... 118</p> <p>27. The Ancient Cities.—III., ... 123</p> <p>28. Gateways of Trade.—I., ... 125</p> <p>29. Gateways of Trade.—II., ... 128</p> <p>30. Gateways of Trade.—III., ... 131</p> <p>31. Gateways of Trade.—IV., ... 135</p> <p>32. Gateways of Trade.—V., ... 140</p> <p>33. Gateways of Trade.—VI., ... 144</p> <p>34. The Woollen Country, ... 148</p> <p>35. The Cotton Country, ... 153</p> <p>36. The Coal-Measures, ... 157</p> <p>37. The Iron and Steel Country. —I., ... 161</p> <p>38. The Iron and Steel Country. —II., ... 164</p> <p>39. Our Railways, ... 168</p> <hr style="width: 20%; margin: 10px auto;"/> <p>Poetry for Recitation, ... 173</p> <p>Exercises on the Lessons, ... 183</p>
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## BOOK III.

### I. "THE BEST OF ISLANDS."

1. More than seven hundred and fifty years ago an old British monk wrote as follows: "Britain, the best of islands, is situated in the Western Ocean, between France and Ireland. It produces everything that is useful to man, with a plenty that never fails."

2. In this book we are going to read about the southern part of this "best of islands." The southern and larger part of *Great Britain*, as the island is now called, consists of England, the land of the English, and Wales, the land of the Welsh. The northern and smaller part of *Great Britain* consists of Scotland, the land of the Scots.

3. A modern poet has asked, "What should they know of England who only England know?" By this he means that those Britons who spend all their lives at home can never rightly know the full greatness of their native land. Before we begin to study the geography of England and Wales, let us see what part Britons play in the life of the world.



4. Let us suppose that we are talking to a foreigner who has never visited Great Britain. He knows nothing of the land from books, but is making an ocean voyage. In the course of this voyage he learns a good deal about our land, though he has never set foot on its soil. What does he learn?

5. Well, first of all, he discovers that, go where he will, there is always a British ship to be seen. Three out of every four ships that sail the ocean belong to Britain. By far the most familiar flag sighted at sea is the red ensign, the flag of the British merchant navy.

6. When our foreign friend puts into a port and goes ashore he sees signs of Britain everywhere. The finest ships in the docks fly the "red duster," as the sailors call it, and at the waterside the English language is more often heard than any other. Even the native dock labourers speak "pidgin" English.

7. Our foreigner cannot help noticing that a large number of British vessels are laden with coal. He finds British coal all over the world; it is the fuel of almost every navy. When he thinks of the vast amount of coal which our land sends abroad, he is sure to say, "How rich Great Britain must be in this mineral!"

8. He notices that other British ships are laden with cotton goods, cloth, iron goods or machinery, all British-made. Our foreigner watches the goods come ashore, and when the ships are empty he sees them filled again with food, or with raw cotton, wool, jute, timber, or some other product of the country with which they are trading.

9. "Ah!" he says, "what a busy land this Great



Britain must be! What an immense number of factories she must have to need all this raw material! Surely Britain is one of the greatest workshops of the world!"

10. Then he puts out to sea again, and one morning he sights a great warship steaming towards him. As it draws nearer and nearer he makes out the white ensign at its stern.

11. This red-cross flag, with the Union Jack in the corner, tells him that the ship is British. He gazes with interest on the huge man-o'-war; and well he may, for the British Royal Navy to which it belongs is by far the largest and most powerful in all the world.

12. Perhaps our foreign friend is surprised to find a British warship so far from home. "What," he asks, "is it doing in these distant seas?" Well, first of all, it is guarding the ocean highway, so that British merchant vessels may come and go in safety. It is a policeman of the "high seas." But it is doing something more. It is guarding the shores of Greater Britain.

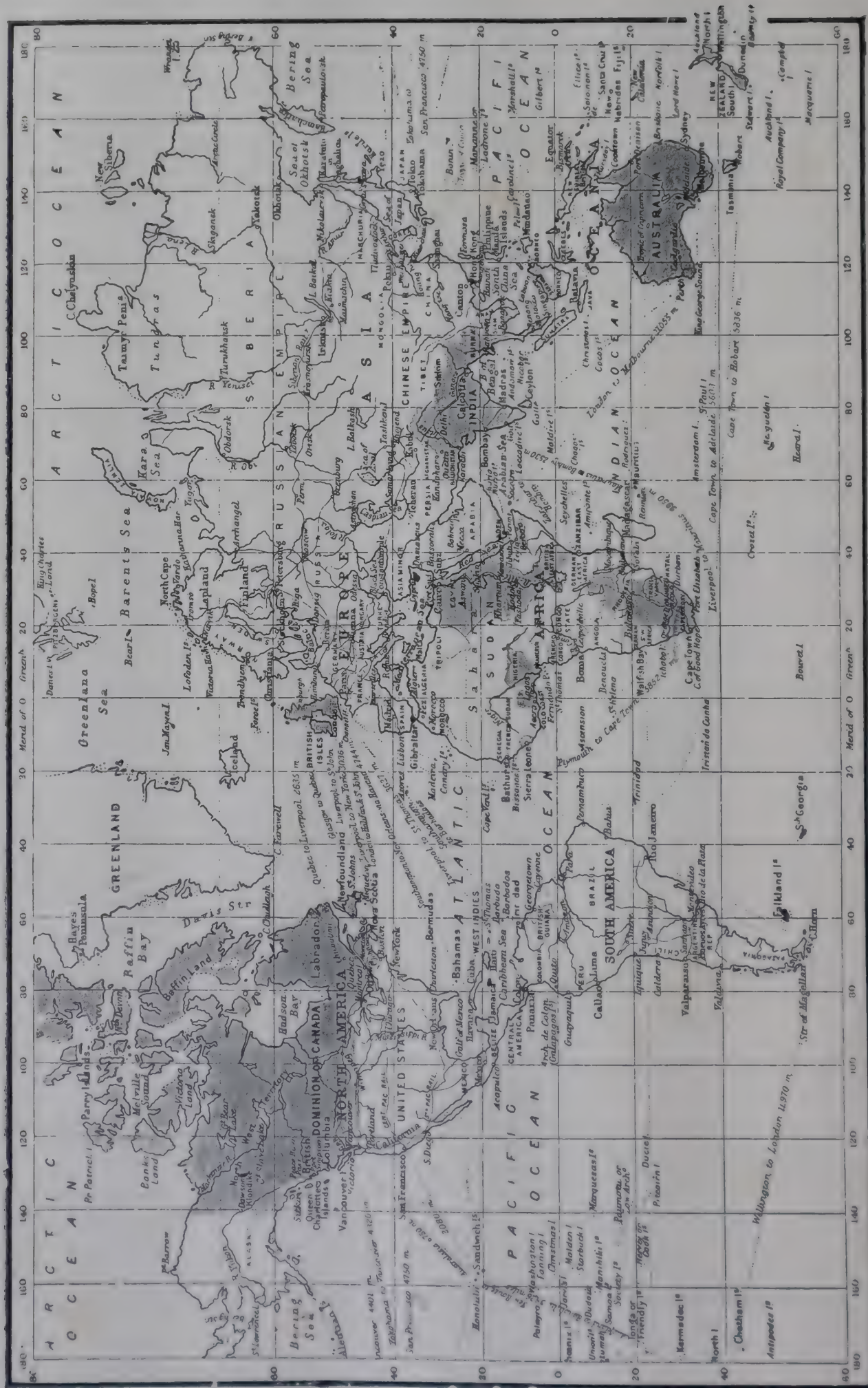
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## 2. OUR NATIONAL BLESSINGS.

1. "Greater Britain!" cries the foreigner. "What is that?" He soon discovers. We hand him a map, which shows him British lands on every continent, both of the Old and the New World.

2. In the Old World he discovers that a large part of Africa and the whole of the vast land of India are British.





MAP OF BRITISH EMPIRE.  
(Countries shaded are part of the Empire.)



He sees, too, that the continent of Australia and the island group of New Zealand belong to the same Power.

3. In the New World he discovers that nearly half the North American continent is painted red to show that it belongs to Britain. Scattered here and there over the rest of the world he sees a number of other red patches, all with the same meaning. As for the isles of the sea belonging to Britain, he finds that they are almost without number.

4. He looks up from the map. "These British," he says, "must be the mightiest people on earth. Nearly a quarter of the whole world owns their sway. What a great country the Mother-land of this vast empire must be! Come, I am eager to learn all about it."

5. Now let us suppose that our foreign friend searches his map of the world in order to find the British Isles, the Mother-land of the vast British Empire. He discovers our islands lying in a cluster off the north-west coast of Europe. They consist of two main islands and a multitude of smaller ones.

6. To his surprise our friend finds that he can cover up the British Isles with the tip of his finger. How small they are compared with the great land-masses of the globe! The continent of Europe, for example, is more than thirty times as large. As for the British Empire, it is actually more than ninety times as large as the Mother-land!

7. Our foreigner will perhaps say, "These islands are certainly small, but size is not everything. The best goods are often packed into the smallest parcels. The dwellers on these islands have become the foremost people of the world, and have won for themselves vast lands beyond the





SONS OF THE EMPIRE.



seas. It is very clear that their small Mother-land must have many and great advantages. What are these advantages?" Let us inquire.

8. First of all, our islands are blessed in the matter of climate. Strangers visiting us do not think so, and they often pity us for the rain and the fogs which we have to endure. Nevertheless, our climate is not to be despised. Charles the Second said that in Britain a man could be out of doors with pleasure on more days in the year, and during more hours of the day, than in any other country of Europe.

9. In Book II. I showed you how to keep a record, day by day, of the direction of the wind. Those of you who have kept such a record know that on two days out of every three the wind blows across the British Isles from the south-west. These winds, as you can see from the map, have to cross a wide expanse of ocean.

10. You already know that the ocean is warmer than the land in winter and cooler than the land in summer. The winds from the ocean, therefore, bring us warmth in winter and coolness in summer. For this reason our climate is much milder than it would otherwise be.

11. Our climate not only makes us strong and keeps us active, but it makes the land fertile. The south-west winds give us so much rain that a carpet of grass grows on ground which would be barren in drier countries. Most of our hillsides, which would otherwise be deserted, are good feeding grounds for sheep.

12. Much of England consists of fertile soil on which wheat, oats, barley, turnips, potatoes, beans, and peas will



grow well. Our pasture lands are the best in the world, and on them thousands of cattle are reared.

13. Now let me tell you of an even greater advantage which we possess. Great Britain is a treasure-house of minerals. Almost every kind of mineral is found in the rocks beneath our soil. It is our mineral wealth which has made us rich and great, and has enabled us to build up our Empire.

14. Tin, lead, copper, salt, and above all coal and iron, are mined in this country. Our coal is the best in the world, and only the United States of America produces more coal than we do. Iron is found close to the coal, and the other materials for smelting it are not far away. For this reason we are famous for the manufacture of iron goods.

15. Because of our coal and iron we are able to manufacture far more goods than our own people need. These goods we send abroad to other nations in exchange for raw material and food. Our foreign trade is the largest in the world.

16. The real secret of British greatness is British trade. In the next lesson we shall see what a very great advantage we have in this respect because of our position on the earth's surface.

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### 3. THE ENCIRCLING SEA.

1. One important reason for our greatness is that we live in an island home. Around us on all sides is the sea, and no part of our land is more than seventy miles away from the nearest salt water. It is not surprising that we have become a nation of sailors.



2. Why have we become a race of seafaring men? Though our forefathers were sailors before they came to Britain, most of them were shepherds and herdsmen and farmers when they settled down in England. There were, however, fishermen on the coast, and sailors were needed to man the ships which carried kings and nobles across the North Sea. To sail the British seas in safety requires good seamanship, and in time our coast dwellers, who had to battle with stormy winds and rough seas, became bold sailors. But it was not until the sixteenth century that we became a seafaring nation of the first rank. Let us try to discover the reason for this fact.

3. Up to the year 1492 men knew very little of the world. Look at this map: the white part of it shows you all the world that was then known. You can easily see that the British Isles were almost at the end of the known world. They were far from the abodes of the great nations, and were therefore of little or no account.



4. After the twin continents of America were discovered, Britain found herself in the very midst of the world. Let me explain. Take a globe and hold it so that Great Britain is opposite to your eye. You now notice that your island-home is the centre of the land of the world. It stands in the best position with regard to the other countries of the globe, and it can reach them all by way of the sea.



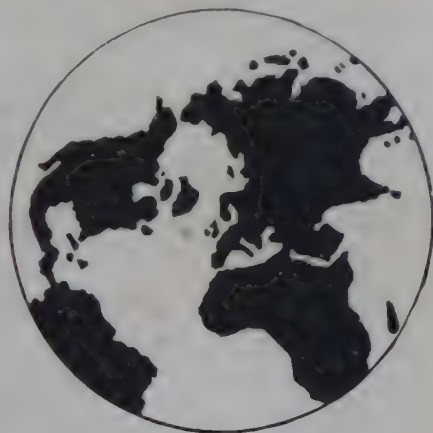


THE BATTLE OF TRAFALGAR.  
(From the painting by C. Stanfield, R.A.) See page 18.



5. What does this mean? Think of your own town. The chief and the busiest shops are to be found in the centre of the town. They have not been built there by accident, but because the centre of the town is the place most convenient to all the people of the town. For this reason it has become the centre of the town's trade.

6. Now, when trade began to grow between the nations of the Old World and the New, Britain was found to be right in the middle of the great markets of the earth. She held a splendid position on the main highway of the ocean, and therefore she was bound to become a great trading nation. She thus became the central shop of the world-city.



7. In the reign of Queen Elizabeth Britons sailed to all parts of the earth, and shortly after her death they began to settle down in the New World. By settlement and by conquest they have become the masters of those wide lands beyond the seas which we call the British Empire. Had we not been a seafaring nation the British Empire could never have arisen.

8. As time went by more and more ships were needed to trade with these and other lands. Now we have by far the largest number of ocean-going ships in the world. We are the common carriers of the ocean, and we carry goods not only for Britons, but for foreign nations as well.

9. Another result of our position is that food and clothing are cheap in Britain. No land can produce all



that it needs, but must draw some of its supplies from foreign countries. Carriage by sea is much cheaper than carriage by land. Owing to the high cost of land carriage, the cost of living in places which are a long way from the sea is apt to be high.

10. The encircling sea is not only our great highway of trade, but it is our chief wall of defence. "The silver streak" which cuts us off from Europe has for hundreds of years kept our foes at bay.

11. The great Napoleon in the year 1803 said that the Channel which divides us from France was but a ditch, and that he meant to cross it and conquer our land. Though he threatened us, he dared not carry out his threat. A few years later Lord Nelson destroyed his fleet at Trafalgar, and all danger of invasion passed away.

12. Look at the map of Europe, and notice that France and Germany have no strip of sea between them. They have only a land boundary. All along their border line they have been obliged to build fortresses and fill them with soldiers. Frenchmen and Germans must always be watching each other along the frontier; and this is bad for both countries, because it costs much money and keeps many men from tilling the soil or working in mines or factories.

13. The encircling sea is not only a highway and a defence to Britain, but it is also a source of food supplies. There are excellent fishing grounds in the British seas, especially in the North Sea, and, thanks to quick steamers and fast trains, fresh fish comes to our tables more quickly and more cheaply than in any other country.





### Commerce and Sea-Power.

(From the picture by W. I. Wyllie, R.A., in the Guildhall Art Gallery. By permission of the Corporation of London.)

Whoever commands the sea commands the trade; whoever commands the trade of the world commands the riches of the world; and consequently, the world itself. — Sir Walter Raleigh.]





BEACHY HEAD : "CLOUD SHADOWS OVER SEA AND LAND."  
(From the picture by F. Goodall, R.A.)



14. The coast-line of Britain also marks her out as a great seafaring land. Notice how broken the seashore is. Observe the deep inlets, the bays, and river-mouths which run so far into the land that a day's cycle ride from anywhere will bring you within sight of the sea.

15. Few lands have better harbours than Britain, and they are near the coal-fields. It is only a short distance by rail, road, river, or canal from the industrial centres to their ports. Thus the cost of land carriage, for both raw materials and finished goods, is not great, and this is one of the reasons why we can manufacture cheaply.

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#### 4. OUR FIRST AEROPLANE FLIGHT.

1. We are now to give our foreign friend his first view of South Britain. It shall be a bird's-eye view, for the best general idea of a country can be obtained by looking down upon it from a height. We will charter an aeroplane and prepare for a flight from Brighton, on the coast of the English Channel, to the ancient city of Berwick, on the borderland of Scotland.

2. Our aeroplane rises like a graceful bird, and we ascend higher and higher until we are five hundred feet above the level of the sea. From this height we are able to look far and wide over the country, and we are high enough to pass over all the hills that we are likely to meet.

3. At once we begin to cross a line of chalk heights fringing the shore. We know that they are made of chalk, from the appearance of Beachy Head, the great white cliff



at the end of the line. These heights are known as the South Downs. We notice that they are gently rounded hills covered with short, crisp grass, on which thousands of sheep are feeding.

4. On we go northward. Below us we see the shadows chasing each other across yellow cornfields and green pastures. Here and there are quiet villages, each with its church nestling amidst the trees. Gently-flowing streams wind towards the south and break through the chalk hills to reach the English Channel. The whole country rises and falls like the waves on a summer sea. There are no lofty hills and no deep valleys; it is a gentle, peaceful, smiling land.

5. Soon we see another line of chalk heights before us. These are the North Downs, and they stretch away eastward to end at the Strait of Dover in the white cliffs of Old England. Beyond the North Downs the sky is dark with smoke. We are approaching London, the largest city on earth. Notice how it sprawls over the country like a huge octopus.

6. Now that we are sailing over the great city we begin to realize its enormous extent. It covers some seven hundred square miles, and contains one-sixth of all the people in England. Listen to the roar that comes up from the crowded streets! It never ceases night or day.

7. Sweeping through the great city is the broad stream of the river Thames. Turning our eyes to the west we see it lying like the folds of a snake along a broad, pleasant valley. To the east we notice it growing broader and broader, until it mingles with the waters of the North Sea, sixty miles away.



8. We leave the smoke of London behind and speed northward once more. Away to the east the country is very low and flat, but in front of us we see another swelling line of chalk hills stretching to the north-east. Looking down on these pleasant hills we see clumps of wood and broad patches of plough-land and meadow. On the tops of the hills we again see many sheep browsing on the short, sweet grass.

9. On we go over country that gently rises and falls, but nowhere lifts itself into a striking hill. To the east the land looks as flat as the palm of your hand. Across it slow-winding rivers flow lazily to the sea. Now and then they spread out into broad, shallow lakes.

10. Now we have crossed the broad estuary of the Humber and are speeding over the Vale of York. To the north-west we see a dark uplift of high land. It is the Pennine Chain, and we shall have it in view on our left hand almost all the way to Berwick. Below us are fruitful corn-lands and rich pastures, and seaward we see another range of low hills.

11. As we proceed northward we notice that the country between the Pennines and the sea becomes narrower, and that the hills throw off spurs which sink lower and lower as they approach the sea. Beneath us are bleak moorlands, and in the valleys we see swift rivers hurrying eastward. Tall chimneys lift their heads and pour out clouds of black smoke. Large towns begin to appear, and almost everywhere we see the headgear of coal-pits.

12. On and on we go, and now in front of us a range of hills rises up to block the way. Beneath us the country is



still hilly, though it is flat along the coast. We swerve aside and fly over this level land until we see the red roofs of the old border town of Berwick and the shining waters of the river Tweed.

13. Now we come to earth again, for our journey is done. We have crossed England from south to north. Let us ask our foreign friend what he thinks of the England which he has seen.

14. "Your country," he says, "is, for the most part, a great plain. Your hills are low, and you have no mountains. Most of your rivers are slow-flowing and useful, but they are not large. Except London and a few places in the north, you have no great cities.

15. "Your country is not crowded, and your people, except in London and the north, are chiefly farmers and herdsmen and shepherds. I thought England was a busy mining and manufacturing country, and I expected it to be black with smoke and thickly covered with large towns. On the contrary, it is a peaceful, agricultural land."

16. "Wait a little," we reply; "you have not seen all England yet. We will make two more flights, and then you will alter your opinion."

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## 5. OUR SECOND FLIGHT.

1. Now we are ready for an aeroplane flight across South Britain in another direction. This time we shall fly from north to south along the western side of our land. Our starting-point is the old border town of Carlisle.



2. Our aeroplane soars up from the meadows beside the river Eden, and we set our faces towards the south. Almost at once we notice that we are drawing near to mountainous country. In front of us, to our left, we see the Pennines once more, and notice a lofty peak that ascends to nearly three thousand feet above sea-level.



DERWENTWATER AND SKIDDAW, WITH BASSENTHWAITE IN THE DISTANCE.

3. Right ahead of us lies a range of mountains which seems to bar our way. Higher and higher we rise until we are well over three thousand feet high. We are now hovering over Skiddaw, and a beautiful prospect is unfolded to our gaze.

4. The whole country in front of us seems to be wrinkled into mountains. Almost immediately below us



is the lovely oval lake of Derwentwater, the most beautiful sheet of water in the whole country. It is set in a frame of green hills, and is skirted by trees right to the water's edge. Wooded islets seem to float on its surface, and rowing boats and little steamers dart to and fro.

5. Beyond the lake the mountains rise bare and high. We speed on towards the loftiest of them, and hover over Sca Fell Pike, the highest mountain in all England. It is a clear day, and the whole district lies spread out below us like a map. To the south and west we see the sea; to the east our view is bounded by the Pennines.

6. Below us the ranges of hills which cover the country look like a huge star-fish. The valleys are narrow and deep, and in every one of them there is a sparkling river or a gleaming lake. From our lofty position we can see at least nine of the loveliest sheets of water to be found in any land. One of them is Windermere, the largest lake in England.

7. How silent and deserted the whole district seems! There are few villages and no towns. Sheep feed on the hillsides in countless numbers. The tops of the highest mountains are bare and weather-worn into all sorts of strange shapes.

8. We leave this beautiful land of mountain and lake behind us and fly across fifty or sixty miles of sea. To our right is the Isle of Man, a large island which also seems mountainous. Below us are numerous steamships and sailing vessels. From our lofty perch they look like the toy boats of little children.

9. Now a great headland looms before us, and we ascend

in order to fly over it. We have reached the shores of Wales. Once more we are in a mountainous land. In front of us, on our right, and on our left, the high hills soar up to the sky.

10. Yonder on our right is Snowdon, four hundred feet higher than Sca Fell Pike, and near it are other peaks almost as high. We have scarcely lost sight of Snowdon



"THE SEA-FRETTED CLIFFS OF LAND'S END."

before another striking mountain called Cader Idris lifts itself above its fellows.

11. On we go across a land of rocky heights and barren moorlands, with rushing streams in the valleys. This, too, is a silent, deserted land. The abodes of men are few and far between.

12. Once more we shoot out over the sea. A flight of thirty miles above the waves brings us to a high



rocky shore. We have reached the south-western part of England. Right away to the western sea most of the land is high and bare and rocky. It ends in the huge sea-fretted cliffs of Land's End.

13. We are now soaring above the wild moorland known as Exmoor. Yonder is Dunkerry Beacon, its highest peak, half as high as Snowdon. A few miles of lowland follow, and then we come to a lofty region once more.

14. The desolate upland of Dartmoor, with its bogs and hurrying streams, lies beneath us. Here and there we see the shapeless masses of the Tors. One of them, Yes Tor, lifts itself more than two thousand feet above sea-level. The clouds begin to gather, and a drift of rain overtakes us. We descend on the shores of the English Channel, and our second flight is over.

15. Again we turn to our companion. "Ah!" he says, "this land of yours is very puzzling. One day I fly over a rich plain of farms and pastures, where your people till the soil and feed cattle and sheep. I see no mountains, but only low hills.

16. "Another day I fly over land that is nearly all mountains. I see a lonely, rocky land, with many sheep on the hillsides and few people in the valleys. There are two Englands, one on each side. I have seen them both, and neither is the England which I expected to see."

17. "Wait a little longer," we reply. "There is yet a third England. We will make a flight across it, and then you will know something of our land as it really is."



**The Golden Valley.**

*From the picture by Sir Alfred East, A.R.A., in the Leeds Art Gallery. By permission of the Leeds City Council.*



## 6. OUR THIRD FLIGHT.

1. Again our aeroplane rises, and once more we direct our course northward. We start from the old city of Exeter, and for thirty miles or so we fly above one of the loveliest parts of England. There are beautiful valleys, wooded hills, and shining rivers below us, and we see well-tilled farms everywhere.

2. Now we take a short flight across the Bristol Channel, and when we reach the land on the other side there is a great change in the view. We are flying over the coal district of South Wales. Everywhere we see towns clustered together so closely that it is hard to say where one ends and the other begins.

3. Tall chimneys belch out black clouds of smoke, and we see the glare of the furnaces where metals are being smelted. Everywhere we notice coal-pits. Thousands of men are working underground, hewing the coal that sets in motion the wheels of factories and drives steamships through the stormiest seas.

4. Yonder are great seaports where hundreds of ships are being laden with coal for use in our own and distant lands. We are poised over a great hive of industry, where the busy bees are crowds of toiling men.

5. Now we direct our course to the north-east, and once more we find ourselves sailing over fine farming country. On our right is a great stretch of forest, full of oaks that have been growing since the days of the Druids. Down below us are orchards, which in the autumn are thick with apples that grow rosy in the sun.

6. We now cross the beautiful river Severn, the longest river in England, and speed on towards what is known as the Black Country. Well does it deserve the name, for though there are many pretty hills and valleys in it, most of the district is black with smoke and ugly with mounds of refuse from the coal-pits.

7. Below us are the Midlands of England. Look down and see the railway lines, roads, and canals which lie like a cobweb upon the land. Look at the great towns with their forests of chimneys. See the flames rising from the tops of the blast furnaces! Everything that can be made of metal is manufactured in this district.

8. We are now soaring above the great busy city of Birmingham. There are countless workshops down below, in which thousands of men are busy making metal goods, which are sent to the ends of the earth.

9. From Birmingham we will make a round tour. We first fly northwards. One by one the towns of the Black Country tail off, and we cross a stretch of farming land. Ere long, however, the smoke in the sky tells us that we are drawing near to another busy hive of industry.

10. Again we see a cluster of towns; once more we see the smoking chimneys and the headgear of pits. Here we find thousands of men, women, and children hard at work making pottery of all sorts. This is the district called the Potteries.

11. On we go across the pleasant meadows of Cheshire, where fine old houses nestle among the trees, and cows stand knee-deep in the grass. Away to our right is a lofty highland region. It is the southern end of the Pennine





**In the Black Country.**  
*(From the picture by Charles J. de Lacy.)*

Chain, and its highest portion is the Peak. There is no loftier mountain in England between us and the English Channel.

12. Now we find ourselves in the busiest manufacturing district of all. The great city of Manchester looms before us. It is the central market for a large number of busy towns all engaged in spinning and weaving cotton. Every town in this district has many factories, in which more than a million men, women, and children are busily engaged in making cotton goods.

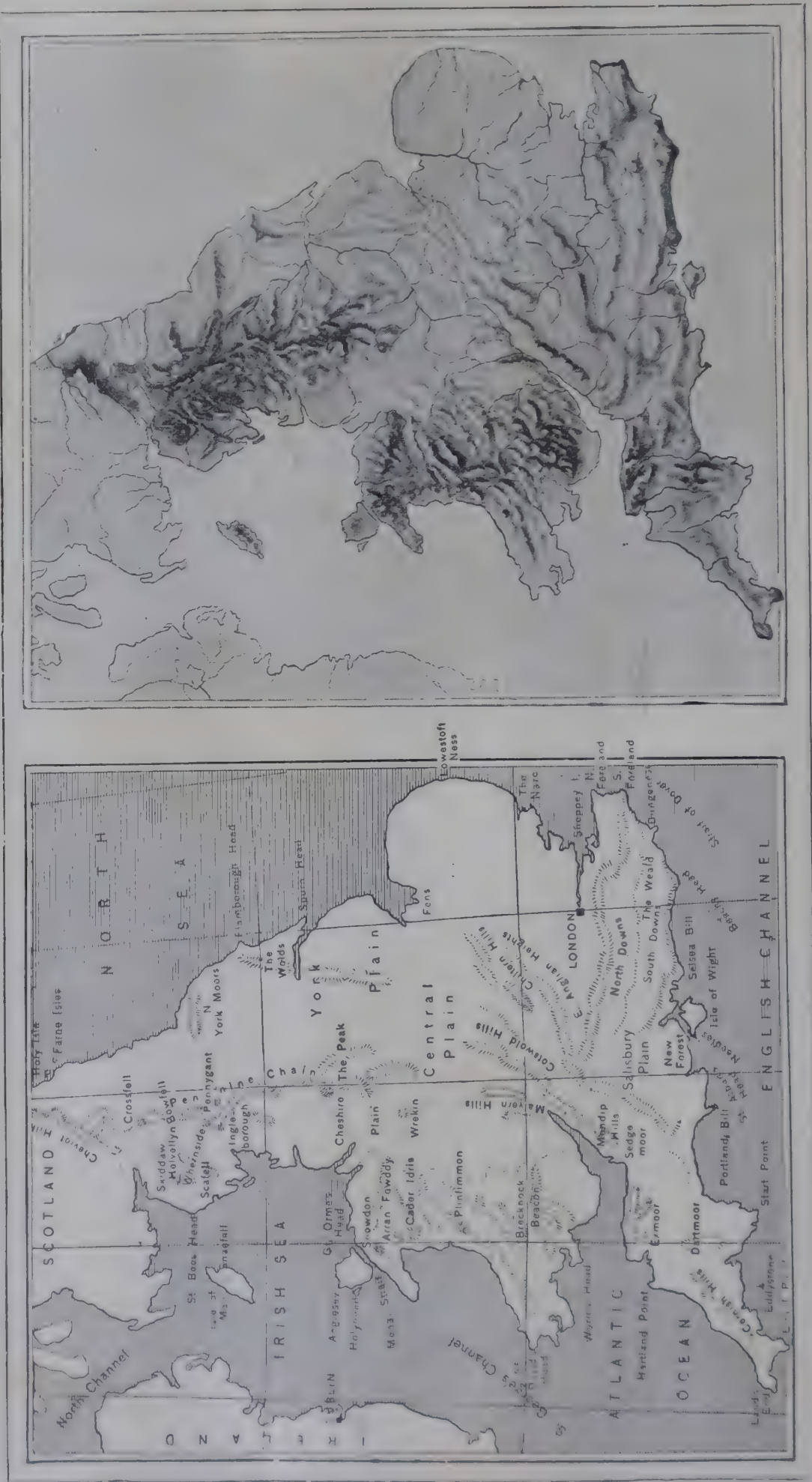
13. Now we turn eastward, cross the Pennines, and on their eastern side we find ourselves in another district where great and busy towns stand close together. Here we find the chief woollen manufactures of our land.

14. We turn southward, and as we proceed we pass over towns in which iron and steel goods of all kinds are made. We are still in a region of coal pits, iron mines, and tall chimneys.

15. Yonder is Nottingham. In its factories lace and hosiery of all kinds are made in vast quantities. A short flight to the south-west brings us back to Birmingham once more.

16. Our third and last flight is over. Our foreign friend cries, "Now I have seen the England which gives you your wealth and greatness. I have sailed over your coal-fields, and I have seen your ironworks and factories. It is not a beautiful England that I have just seen, but it is *the* England which makes you rich and the greatest manufacturing Power in the world."





SKETCH AND RELIEF MAPS OF ENGLAND AND WALES.

## 7 READING THE MAP.

1. In the last three lessons we have soared above England and Wales, and have looked down upon its mountains, its hills, its valleys, and its plains. We have now some general ideas about the build of South Britain. These we will try to fix by looking carefully at the two maps given on the opposite page.

2. One of them is a relief map—that is, a shaded map which shows us clearly the ups and downs of the land. The other is a sketch map, showing the mountains and hills in the usual way.

3. First let us look at the shape of England and Wales. We see at once that it is roughly shaped like a triangle, with very broken sides. The base of the triangle is washed by the waters of the English Channel. The east and west sides almost meet at the narrow neck of land where England joins Scotland. South Britain thus forms a peninsula, with water on all sides except on the north.

4. In our first flight we sailed over the east of the land from south to north, and nowhere did we see a mountain. Look carefully at the map and you will notice that the whole of the eastern side of England is a great plain.

5. Start at Berwick, follow the line of the Cheviot Hills and the Pennine Chain to the Peak, then draw a line to the old cathedral city of Exeter in the south-west. All the mountains of our land lie to the west of the line which you have just drawn.

6. Let us give our attention to the great plain which lies east of the line. You notice at once that it forms



two-thirds of England. It is crossed by many ranges of hills, but we know that all of them are low. Some of them are chalk hills, others are of limestone.

7. The longest of our chalk ranges starts near the mouth of the river Exe, which runs into the English Channel. Follow this range on the map, and you will see that, though often broken, it crosses the country in a north-easterly direction and comes to an end just east of the Wash. To the north, across the Wash, it begins again, and ends in the fine, bold cliffs of Flamborough Head, on which live tens of thousands of sea-birds.

8. In the south-east of England you will find two other chalk ranges. The North Downs end in the headland known as South Foreland; the South Downs end in Beachy Head. In our flight from Brighton northwards we crossed these ranges and noticed that they were gently rounded hills covered with short grass.

9. Find Portland Bill on the south coast of England, and then the North York Moors away to the north-east. From Portland Bill to the North York Moors we may trace the limestone hills in a great sweeping curve. The limestone hills are built up of grains of lime, something like the roe of a fish.

10. In the north-east of England the plain is rather narrow, for the spurs of the Cheviots and the Pennines run seaward and make the country hilly. Farther south you will notice that the plain broadens out, but is cut off from the sea by the York Moors and the Yorkshire Wolds. Between the Pennines and these hills lies the rich farming tract of the York Plain or Vale of York.

11. About midway along the east coast of England you will see a great square inlet of the sea. This is the Wash. All round it is the wide, marshy plain of the Fens. Some parts of this plain are only just above sea-level, while other parts are below it. Formerly the district was a dreary, unhealthy waste. It is now the richest corn-growing part of the British Isles.



ON A NORFOLK RIVER.

12. Eastward of a line drawn from the Fens to London is the broad, flat stretch of country known as East Anglia. It, too, is rich farming country. In the north the rivers spread out into wide, shallow sheets of water called "Broads." Fish abound in these waters, and wild-fowl breed in the reeds which surround them. In summer



the rivers and meres are gay with the yachts of pleasure parties.

13. That part of lowland England which lies between the Pennines, the Welsh mountains, and the limestone hills is known as the Central Plain. It is the highest and most fertile of all our plains. In former times it was covered with forests. We can still find the Forest of Arden and Charnwood Forest on the map, but these are now only names. Most of the trees have been cut down, and the woodland has been turned into fields.

14. The middle of this plain is one of the busiest parts of England. You will remember that we flew across it in our third flight. We then noticed that coal and iron mines abound in it, and that all kinds of steel and iron goods are made. In a part of the plain where there are good beds of clay we found the people chiefly engaged in making pottery.

15. We have now studied two great plains—the Eastern Plain and the Central Plain. A third and much smaller plain begins at the foot of the Cumbrian Hills—that is, the hills which we first visited in the course of our second flight. From these hills it stretches southward between the Pennine Chain and the Irish Sea.

16. We already know that the south part of this plain is the most crowded district of England, and perhaps of the whole world. Beneath the soil are vast stores of coal which are used to drive the machinery of many cotton factories.

17. Two small plains in the south of England are worth attention. The first is the Weald, which lies between the North and South Downs. It has been formed by the wearing away of the chalk and the exposure of the clays









and sandstones underlying it. Formerly the Weald was a dense forest, the wood of which was used to smelt the iron ores found in the soil. Now it is famous for its farms and gardens. The other plain is Salisbury Plain, a chalk upland of Wiltshire.

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## 8. THE STORY OF OUR LAND.

1. There are two kinds of history—the history of man, and the history of the earth, which is the abode of man. The history of man in our own country only covers about two thousand years. The history of these islands covers millions of years.

2. We read the history of the people of Britain in books, but we read the history of the British Isles in the rocks. Great Britain existed ages before men took up their abode on it. Those who study the rocks and the soil are able to tell us the story of our islands in these far-off ages. Let us learn a little of this very ancient history.

3. One of the first lessons that we must learn is that Great Britain and Ireland were not always islands. Ages ago they were part of the continent of Europe. The North Sea, which now lies between us and Europe, was then dry land. It was a part of the great plain which stretches across Europe right to the borders of Asia.

4. How do we know this? From the bottom of the North Sea the remains of many animals have been dredged up. As these animals were land animals, it is very clear that once upon a time there was no North Sea at all.



5. The seas round the British Isles are not deep like the ocean, but shallow. In most parts of the North Sea the bottom is touched at one hundred and eighty feet or less. To the east of North England there is a great bank which is only sixty to eighty feet below the surface of the sea.

6. St. Paul's Cathedral in London is three hundred and seventy feet high from the pavement to the top of the cross. If St. Paul's could be planted down anywhere in the North Sea, its dome would stand out above the waves.

7. If the bed of the seas round the British Isles were to be lifted up three hundred feet, Great Britain would again be joined to Europe, and Ireland would be joined to Great Britain. Most of the sea round these islands would disappear, and we should find ourselves living on tablelands in the midst of a surrounding plain.

8. This was the state of things in the days of long ago. Then the North Sea and the Irish Sea and the English Channel were dry land. Across what is now the North Sea a great river, formed largely by the German Rhine, flowed towards the Arctic Ocean. All the rivers in the east of Great Britain were its tributaries. Another river, the source of which was the French Seine, flowed westward along what is now the English Channel; and a third river flowed southward through the valley between England and Ireland.

9. The animals whose bones have been dredged up from the North Sea were quite unlike those of our land to-day. They were elephants, tigers, and rhinoceroses—animals which live in hot climates. This tells us of a time when our islands were as hot as the middle of Africa or India.

10. Long before this time there were volcanoes in our land. We can find the remains of them even now. They hurled out fiery streams of molten rock and showers of ashes, and these now form the oldest and hardest rocks of our islands.



OUR SHALLOW SEAS.

*Depths given in fathoms (1 fathom = 6 feet).*

11. Again and again our islands sank beneath the waves, and beds of sandstone and limestone were laid down above the ancient fire-formed rocks. This went on for countless years.

12. Then came a time when thick forests and jungle-





**Snowdon.**

(From the picture by John Finnie in the Walker Art Gallery, Liverpool. By permission of the Corporation of Liverpool.)

covered a large part of the country. You already know that our land was rising and falling during the ages when the coal-measures were being formed. Then and in later times new beds of limestone and chalk were laid down beneath the sea.

13. Next, the weather slowly became as cold as that of the Arctic regions. Great glaciers crept over the land, moulding the hills, and scratching and polishing the rocks. As they moved forward these glaciers tore up the ground and carried along with them an immense amount of sand and clay.

14. As the centuries rolled on the weather became milder and the glaciers melted. The glacier streams covered much of England north of the Thames with a thick coating of sand and clay. This now forms a very fertile soil.

15. Ages passed away, and the land, which is now the floor of our British seas, sank so much that the waves rolled in and covered it. Then and only then do we reach the time when the first people in our history books lived on these islands.

16. Such, in brief, is the wonderful story which is told by the rocks. You have read it in less than half an hour, but you must remember that in the making of our land a thousand years are but as yesterday.







SNOWDON MOUNTAIN RAILWAY.

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## 9. AMONGST OUR ANCIENT MOUNTAINS.

1. We now turn our attention to the mountainous country, which, you will remember, lies wholly in the west. We flew over this part of the land in the course of our second journey. It is the oldest part of England and Wales.

2. You already know that most of the hills of the low-land country are composed of chalk and limestone. The chalk hills are smooth and rounded; the limestone hills stand in long ridges rising gently on the south side, and generally showing their steep fronts to the north. Both the chalk hills and the limestone hills are composed of the remains of tiny animals that once lived in the sea.

3. Because they were laid down under water we may call them *water-formed* rocks. I told you in Book II. that parts of the earth are always slowly rising, while other parts are slowly sinking, and that what is now dry land has been many times beneath the waves.

4. When we travel into the mountainous west we are

amongst rocks which were also laid down under water. Since that time, however, ages have gone by, and they have suffered great pressure and great heat. This has changed them so much that they are quite different from what we call *water-formed* rocks.

5. Some of these rocks are nothing but the hardened lava which was hurled out of volcanoes ages ago. We know that they were once in a molten state because they contain crystals, and crystals are only formed when a liquid changes into a solid.

6. A well-known rock of this kind is granite. It is a very hard and beautiful rock, and will take a high polish. Because of this quality it is frequently used for monuments and for pillars of public buildings. There is not much granite in this country, but what there is of it is mostly in the mountainous west.

7. In districts which consist largely of granite the streams and lakes are very clear and pure. Off a granite coast the sea is like a shining emerald. A great writer tells us that the men and women who live in granite districts seem to take their character from the hard, firm rock about them, and are strong and unyielding both in mind and in body.

8. Other rocks are formed of the ashes which were shot out of old volcanoes along with the lava. These ashes have been so closely pressed together by the layers of rock laid down above them that they have become very hard and flinty. Some of the rocks formed in this way are so hard that in olden days men made hammers and chisels of them.

9. Even the softest rocks will become hard if they are





WHITESHELL POINT. *From the picture by John Brett, A.R.A.  
(Water-formed rocks (limestone) on the seashore.)*

much pressed and greatly heated. Take the case of slate. Ages ago it was nothing but soft mud at the bottom of the sea. So powerfully has this mud been pressed together, and so greatly has it been altered by heat, that it has quite changed its character.

10. Some slates are soft, and easily crumble away; but others are very hard and glassy, such as the shining green slates which you see used for roofing. Slate splits off into layers, and this is a proof that it has been very greatly pressed and heated.

11. Now I think you begin to understand why the western part of our land is so much higher than the middle and the east. In Book II. I told you that rain, wind, frost, and running water are always at work wearing away the hills and flattening them down. Where the rocks are soft this work goes on most rapidly.

12. The softer rocks are chiefly found in the centre and the east of South Britain, and here the surface of the land has been greatly lowered. In the west the softer rocks have been worn away too, but beneath them are hard, tough rocks which do not yield so readily to the weather. They are higher than the hills of the east because they have not been worn away so much.

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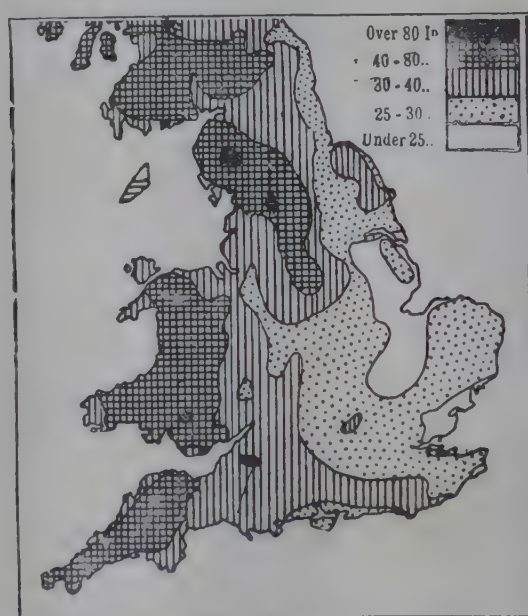
## 10. RAINFALL AND RIVERS.

1. You already know that on two days out of three the wind blows across our island from the west or the south-west—that is, from the Atlantic Ocean. These winds are



warm and laden with moisture. Most of the moisture falls on our land as rain.

2. We saw in our second aeroplane flight that the highlands are in the west of South Britain. The greatest rainfall occurs on the highlands. The clouds driven along by westerly winds no sooner reach our shores than they have to rise high so as to pass over the mountains. This makes them colder, and some of their watery vapour is turned into rain.



RAINFALL MAP.

3. As they travel eastward they are like a sponge which has been squeezed. They have no longer so much water to give up. For this reason the eastern side of England and Wales is not so wet as the western side.

4. You know that it is the rain which makes the rivers. As the mountains are nearer to

the western coast than they are to the eastern, the rivers on the western side have a shorter journey to the sea than those on the other side.

5. Look at your map and you will see that this is true in most cases. You will, however, notice one river of the west which is quite long. This is the Severn.

6. Measure the distance between its source and its mouth as the crow flies. It is but eighty miles, yet the river has a total length of two hundred and ten miles. There are so many mountains lying in the direct path to the sea that the

Severn has to make a wide loop to avoid them. It thus becomes the longest river of our land.

7. Most of the rivers which flow westward from the



mountains to the sea are swift and have rocky courses. Such rivers are of little use for ships, though sometimes their mouths form good harbours.



8. The eastern slope from the mountains to the sea is much longer and far more gentle than the western slope. This means that the rivers flowing eastward are generally longer than those flowing to the west. Their flow is also much less rapid, and for this reason they are far more useful.

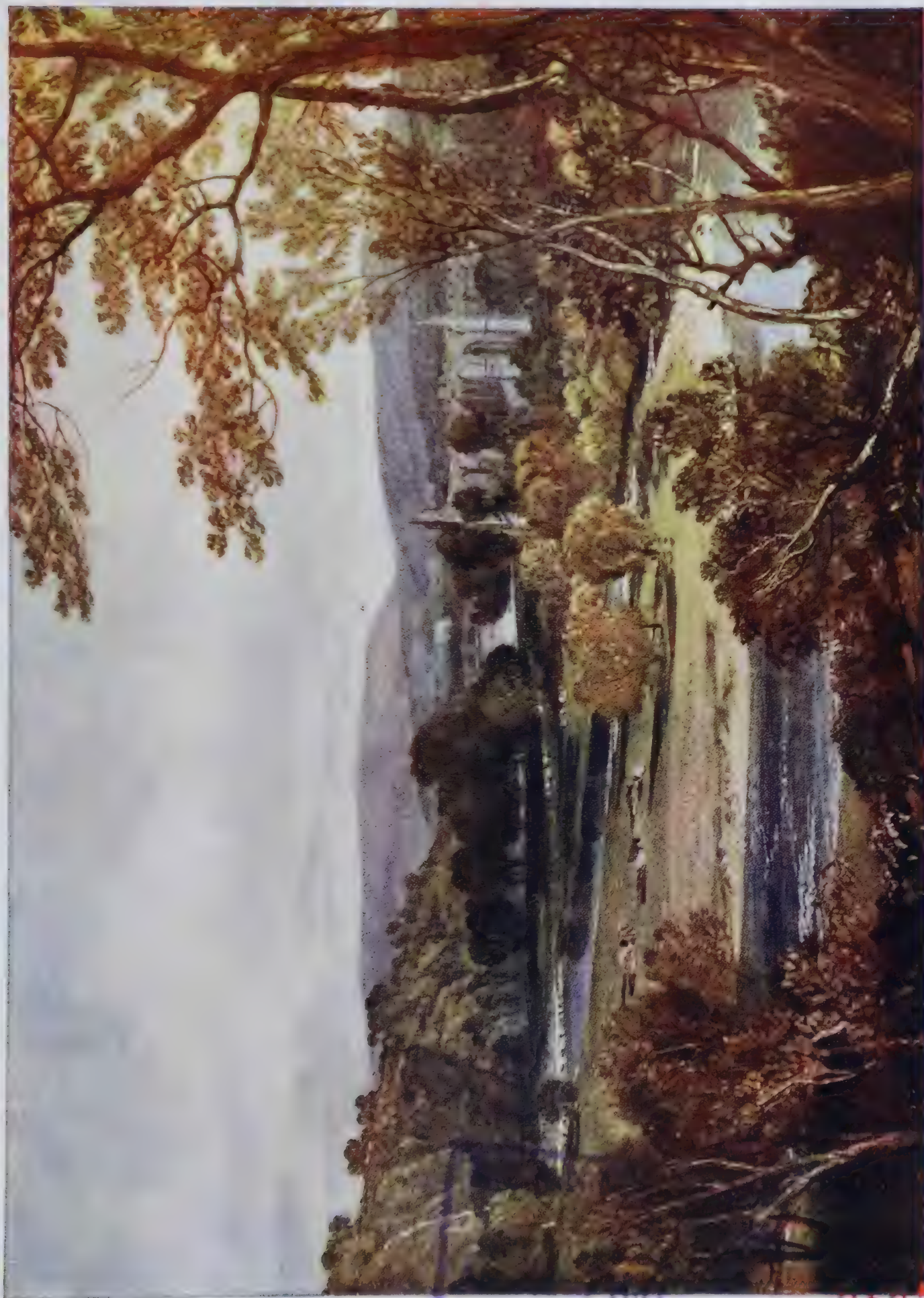
9. In olden days the rivers were the chief roads into the land. So useful were they for carrying goods and passengers that the channels were deepened, and the banks were watched with great care. In order that there should be waterways to as many places as possible, canals were made to join the rivers to each other. In this way barges can go from the seaports to all parts of the country.

10. Now that railways have taken the place of rivers for the carriage of goods and people, our rivers are no longer so important as they were. Some of them, however, are still used by barges. The Yorkshire Ouse, the Trent, the Mersey, the Thames, and the Severn are still useful waterways.

11. The parts of British rivers which are now most important are their mouths. These form harbours, and on their shores we find the seaports through which our great foreign trade finds its way. On the estuary of the Thames we find London, the greatest seaport of the world. At the mouth of the Mersey are Liverpool and Birkenhead.

12. On the Humber we find the port of Hull, and on the Tyne stand Newcastle and other shipping towns. Bristol became famous in former times because the Avon provided it with a good waterway to the sea. Now the Avon is too small for the very big ships which carry our goods to and fro, so docks have been made at the point where the river flows into the Bristol Channel.





Bolton Abbey.

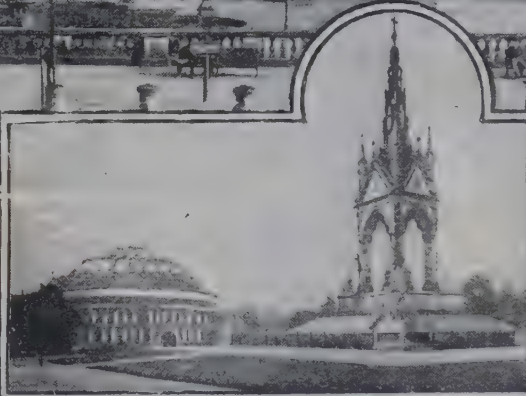
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# VIEWS IN LONDON.

1. Law Courts. (Photo by York.)
2. Marble Arch.
3. Trafalgar Square, looking towards Westminster. (Photo by G. W. Wilson.)
4. Albert Hall and Albert Memorial.
5. New Gladstone Statue, Strand.
6. The New Gaiety Theatre, at the corner of Aldwych and the Strand.
7. Strand improvements: the Savoy Hotel extension.
8. New War Office.



## II. THE HEART OF THE EMPIRE.

1. We must now visit the City of London, which has been called the "heart of the Empire." A great statesman once said, "London is a nation, not a city." He was quite right, for within the bounds of what is called "Greater London" live more than seven million people. In London there are one and a half times as many people as in all Scotland or Ireland. Over ten countries of Europe have fewer inhabitants than Greater London.

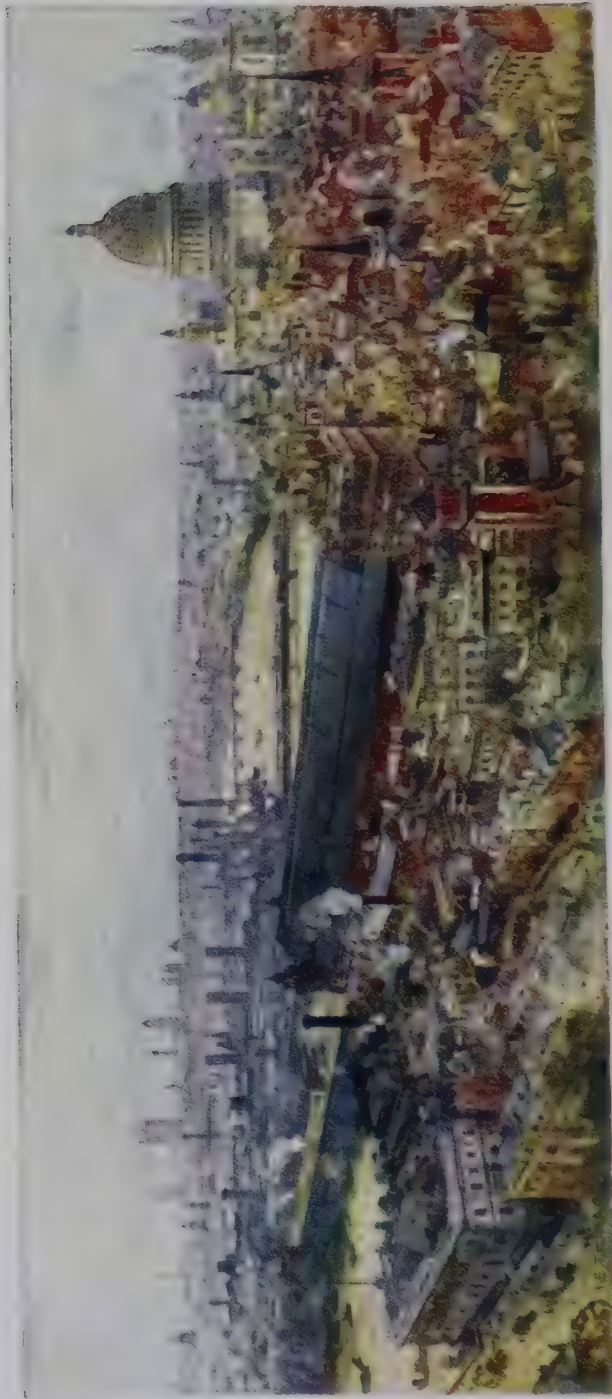
2. So vast is London that a man may live all his life in it and never know it thoroughly. It has more than thirty thousand streets, and these placed end on end would reach from England to China. No one has visited all of them. You already know that Greater London covers an area of seven hundred square miles.

3. I need not repeat that London has grown so great because of its splendid situation on a tidal river opening out towards the continent of Europe. It has always been the trade-centre of England, and all the main roads and all the chief railways of the land meet within its bounds.

4. London is not only the trade-centre of England, but the trade-centre of the British Empire, and, indeed, of the world. Its foreign trade is greater than that of any other city. The offices of most of the chief shipping companies are in London. It is also the centre of the banking and money business of the world.

5. We are not apt to think of London as a great manufacturing city, but there is none greater. Its industries are not only large but very varied. For example, it





A Panorama of London from the River.

employs more than 400,000 people in making clothing, and 50,000 people in making furniture. Besides these industries, it has potteries, glassworks, breweries, and tanneries, and their number increases every day.

6. London is the seat of Government. It contains the great state offices which manage the business of the country, and also the Houses of Parliament where the laws are made. It is also the chief business and shopping centre of the land, and at certain seasons of the year rich people from all parts of the country flock to it.

7. The first great building erected in London was the Tower. It is said that the Romans founded it, and that it was rebuilt by William the Conqueror. It still stands on the north bank of the river not far from London Bridge. Crossing the river close to it is the Tower Bridge, the last of all the bridges on the way to the sea. This bridge is provided with two roadways, the lower of which can be raised to let ships pass through.

8. Many of the great events about which we read in our history books took place in the Tower. For more than eight hundred years it was a prison house, and many state prisoners have been beheaded on Tower Green. Now it contains a museum of armour and weapons, and barracks for soldiers. It also contains the Crown Jewels. The warders of the Tower, or beefeaters, still wear the quaint dress of ancient days.

9. The oldest part of London is "the City," which stretches along the left bank of the river from the Tower to Temple Bar, and northward for less than a mile. Roughly speaking, this was Roman London, and its chief streets still





# HISTORIC LONDON.

1. Roman Bath, Strand Lane.
2. Roman Wall, London Wall.
3. London Stone, Cannon Street.
4. St. Bartholomew's Church, Smithfield (Norman).
5. The Tower.
6. Old Houses in Holborn.
7. St. John's Gate, Clerkenwell.
8. The Monument.
9. Charterhouse Chapel (associated with Thackeray's *Newcomes*).



run over the sites of Roman streets. A portion of the old Roman wall which formerly shut it in can still be seen.

10. Within the City, which is the great business part of the capital, are some of the most famous of London's buildings. Not far from the river is St. Paul's Cathedral, the grandest of all our English churches. It was built by Sir Christopher Wren, and is his chief monument. Within its walls are the tombs of Nelson and Wellington.

11. The Bank of England is also in the City. It is a heavy, dull building with thick iron gates, and stands in the very busiest part of London. Nowhere in the world is there such a throng of men, carts, cabs, omnibuses, motors, and wagons. Near at hand is the Mansion House, the Town Hall of the city, and not far away is St. Martin's le Grand, the headquarters of the Postal system.

12. The most interesting of the many churches in the City is St. Bartholomew's in Smithfield. It is a grand old Norman church, and contains the tomb of Rahere, an early abbot. Close to the church is St. Bartholomew's Hospital, the largest of its kind in the kingdom. Opposite to the Hospital we see the great cattle markets of Smithfield.

13. The Guildhall in King Street is another famous building, with a good library and art gallery. In its great hall, which is famous for its fine ceiling and stained glass windows, are models of the two fabled City giants, Gog and Magog. In this hall the City of London entertains those whom it delights to honour.

14. Before we leave the City we must visit the Monument on Fish Street Hill. It is a graceful column 212 feet high, and is ascended by 345 steps. From the top there



is a good view. You will remember that the Monument was built in memory of the Great Fire which nearly destroyed London in the year 1666.

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## 12. RAMBLES IN LONDON

1. From the City, London spreads out north, south, east, and west. It really consists of twenty-eight separate towns, each with its own Mayor and Town Council. One great public body, called the London County Council, manages the affairs of London as a whole.

2. To the west of the City is Westminster, the most stately part of all London. Along the bank of the river is a broad, tree-fringed roadway known as the Embankment. A walk along this Embankment takes us past many fine buildings with well-kept gardens. In the course of our ramble we shall see Cleopatra's Needle, a very old monument from Egypt.

3. Parallel with the Embankment is the busy street of shops, hotels, and theatres known as the Strand. At its east end are the Royal Courts of Justice, and between them and the river is the Temple, containing two of the Inns of Court—that is, colleges of lawyers. The old Temple Church, which is one of the few round churches in England, contains tombs of Crusaders. The Temple also boasts two fine halls and well-kept gardens stretching to the Embankment.

4. At the west end of the Strand is Trafalgar Square, with Nelson's proud column guarded by the famous lions. St. Martin's Church stands at the north-east corner, and the National Gallery forms one side of the square. Striking

off west from Trafalgar Square is Pall Mall, in which are some of London's chief clubs; Marlborough House, the town house of the Prince of Wales; and the Palace of St. James's. On the other side of St. James's Park is Buckingham Palace.

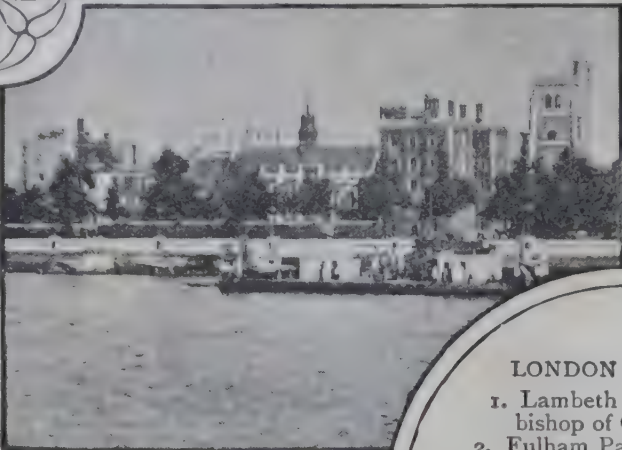
5. The fine broad street running to the south from



HOUSES OF PARLIAMENT AND WESTMINSTER HALL.

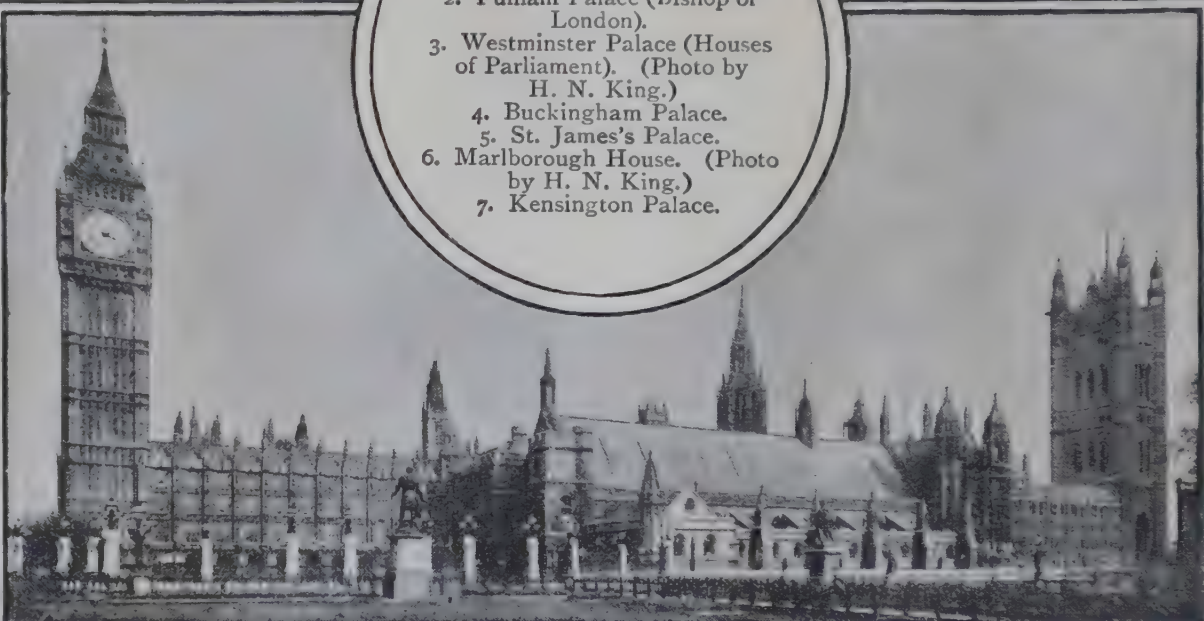
Trafalgar Square is Whitehall, where the chief Government offices stand. Half-way down on the left-hand side is Whitehall Palace, in front of which King Charles was executed. Towards the end of the street on the right is Downing Street, which contains the house in which the Prime Minister resides.





**LONDON PALACES.**

1. Lambeth Palace (Archbishop of Canterbury).
2. Fulham Palace (Bishop of London).
3. Westminster Palace (Houses of Parliament). (Photo by H. N. King.)
4. Buckingham Palace.
5. St. James's Palace.
6. Marlborough House. (Photo by H. N. King.)
7. Kensington Palace.





6. When you reach the end of the street a noble prospect greets you. Across the open square is Westminster Abbey, gray with its thousand years. Most of our kings and queens from Harold to George the Fifth have been crowned in it. Fourteen kings and as many queens lie buried in the Abbey, together with many of the great dead of the British race. Close to the Abbey is St. Margaret's Church, where Sir Walter Raleigh is buried.

7. The splendid pile of buildings fronting the river is the Palace of Westminster, which contains the Houses of Parliament and Westminster Hall. The latter, with its great oaken roof, was built by William Rufus. On its floor you may see a plate marking the spot where King Charles stood during his trial. You will remember that our late King Edward lay in state in the same noble hall. Formerly the chief courts of justice were held in it.

8. Within the Palace are the two chambers in which the Lords and the Commons meet to make the laws of the land. Above the buildings rise two graceful towers, the higher of which contains a great clock and the famous bell Big Ben. Above the smaller tower the Union Jack floats by day ; and at night, when Parliament is sitting, an electric light gleams out from the larger.

9. Now we must bring our ramble in London to a close, though we have only had a few glimpses of its many wonders. We have seen nothing of its beautiful parks and its famous Zoo ; we have passed by its great railway stations, colleges, libraries, museums, schools, and churches. To see them all would take a lifetime.

10. We have not lingered in the West End, where the



rich and powerful have their town houses ; nor have we visited the suburbs, where the well-to-do middle class live in pleasant villas surrounded by bright gardens. We have also neglected the great docks, and the mean streets where the poor live, sometimes in the most wretched of homes.

11. Before we leave, let us look for a few moments at the traffic in the streets. Nothing will give us so good an idea of the vast numbers of people who live in London. From early morning to late at night the streets are thronged with hurrying crowds, and yet we only see a small part of the people.

12. Much of the traffic is carried on below the streets by means of underground railways and "tubes." The busiest streets are so crowded that there is no room for trams, so horse and motor omnibuses have to be used. How to deal properly with London traffic is one of the most difficult problems which have to be solved.

13. More than a dozen fine bridges span the river, and beneath its bed are several tunnels. The oldest of these is the Thames Tunnel, which was made as far back as 1843. Other important roadways beneath the river are the Blackwall Tunnel, joining Blackwall on the north bank to Greenwich on the south side, and the Rotherhithe and Ratcliffe Tunnel, which was opened in 1908.

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— The Pool of London.

(From the picture by J. M. W. Turner, R.A., in the National Gallery of British Art.)

[14] The parts of British rivers which are now most useful are their mouths.



## 13. THE "DOWN COUNTRY."—I.

1. Now that we have visited the "Heart of the Empire," we are ready to make excursions into the various "regions" of England and Wales. By a "region" I mean a tract of land which is marked off in some special way from other parts of the country.



THE DOWNS AND THE WEALD.

[Photo by Foster.]

2. To-day we will visit that region of South England which is known as the "Down Country." A poet sings,—

"Broad and bare to the skies  
The great Down Country lies,  
Green in the glances of the sun  
Fresh with the clear salt air;  
Screaming the gulls rise from the fresh-turned mould  
Where the round bosom of the wind-swept wold  
Slopes to the valley fair."

3. You will remember that during our first aeroplane flight we sailed over the South and North Downs, and noticed that they were chalk hills. Ages ago a great sheet of chalk was laid down over a large part of the south and east of England. In the course of time much of this chalk sheet has been worn away, and in some places it has been covered up with clay and gravel. In the country to the south of London we find the edges of the old chalk sheet standing up like sea waves about to break upon the shore. These steep edges of the old chalk sheet form the Downs.

4. Look at your map and find Salisbury Plain, in the county of Wiltshire. This chalk upland seems to be the centre from which the chalk ranges of England spring. From Salisbury Plain we can trace a broken line of chalk ridges right across the country to Flamborough Head, on the coast of Yorkshire.

5. Running east from Salisbury Plain we find a ridge of chalk hills, which divides into two ranges like the prongs of a fork. The more northerly prong runs to the shores of the Strait of Dover and ends in Shakespeare Cliff. This range is the North Downs. The more southerly prong curves in a south-easterly direction, and reaches the Sussex coast, which it skirts until it comes to an end in Beachy Head. This range is known as the South Downs.

6. Let us climb the South Downs and ascend one of the summits, such as Chactonbury Ring. It is a warm afternoon in early summer, and the air is full of the humming of bees and the singing of larks. The short hill turf is the best walking ground in the world, and there is no greater pleasure





**The Hay Wain.**

*(From the picture by John Constable, R.A., in the National Gallery.)*

[This picture shows a typical English rural scene.]

than to roam along the crest of these Downs with the cool winds blowing in from the sea.

7. We stoop to smell the thyme, and at once observe the white chalk at the roots of the grass. When we lift our eyes we notice, too, the whiteness of the little roads that run across the Downs. On the summit is a fine clump of beeches. Beech is *the* tree of the chalk, and you will see beech woods in all the hollows. Down in the plain at our feet are woods of oak and pine.

8. On these chalk Downs the early Britons fed their flocks and fought their fierce battles. The Downs have been a sheep-rearing country for two thousand years. All along the ridge you may still see traces of the "forts" in which the Britons took refuge with their flocks when invaders appeared.

9. Now we are on the crest of the ridge looking southward to the sea. If we were sailing on the English Channel, we could not fail to notice the white cliffs which fringe the water. These cliffs were the first part of England which the Romans saw. From the colour of the chalk they called the country "Albion," or the White Land.

10. There are many fine watering-places along this coast, the chief of which is Brighton. There are also a number of little seaports which used to be very famous. From their harbours, in the brave days of old, great fleets sailed to France. Most of these ports have long since lost their ancient renown. Some of them, such as Rye and Winchelsea, are no longer ports but inland towns. The sea has deserted them; the land has slowly risen; and these old ports have been left high and dry.



## 14. THE "DOWN COUNTRY."—2.

1. At various places along the Downs little rivers break through the chalk in deep-cut valleys and find their way to the English Channel. Some of these rivers are the Sussex Ouse, the Adur, and the Arun. On their estuaries our first English ships were built.

2. Though we see rivers breaking through the Downs, we find no streams on the hills. There are many green cup-shaped valleys in the hills, but you will look in vain for a brook running through them. How, then, do the people who live on the Downs get their water? If we walk for a mile or so farther on we shall soon discover. Here is a round pond half filled with water, from which sheep have just been drinking. This is a dew-pond: it is not fed by a spring.

3. The old Britons made dew-ponds of this kind long before the coming of the Romans. They scooped a hollow in the ground, and lined it with straw and gravel so as to make it water-tight. A lining of this kind prevents the earth's heat from coming through. During summer nights the cold gravel turns the moisture of the air into water, which collects in the hollow and thus fills the dew-pond.

4. Now turn your eyes to the north. Nearly thirty miles away you see the ridge of the North Downs. Yonder is Leith Hill, which we recognize because of the high tower on its summit. Between us and the North Downs is the plain of the Weald, which has been formed by the wearing away of the chalk sheet and the exposure of the gravel and clay which lie beneath. In former days it

was covered with a forest so dense that there was no path through it. Now the trees have largely disappeared, and farms and pastures have taken their place.

5. We will not cross the Weald, but will continue our walk along the South Downs, which now curve inland towards the north-west. A long tramp lies before us, and in its course we shall pass many little villages with old churches built of flints from the chalk. Below us we shall see little towns such as Arundel, with its great castle, and Midhurst and Petersfield.

6. Now we cross the valley of the Itchen, which breaks through the Downs and discharges itself into the head of Southampton Water. Below us we see the ancient city of Winchester, which in early days was the capital of England. Ten miles or so farther west we reach the Test, a full, clear river, which, like the Itchen, is a famous trout stream. It too flows into Southampton Water.

7. Beyond the Test we see no single range of chalk hills, but a rolling upland which covers the country for many miles. We have reached Salisbury Plain, which, as you know, is the starting-point of the chalk hills. It is also the starting-point of the limestone hills. Away to the north are the Cotswold Hills, in which the Thames takes its rise. To the west we see the Mendip Hills, and to the south the limestone ridge which ends in the quarries of Portland.

8. Salisbury Plain is very much like the veld of South Africa: it consists of rolling country like green waves, stretching as far as the eye can see. It is now the chief training-ground of the British army in England. During



our walk we are almost sure to see soldiers drilling or fighting sham battles.

9. The chief wonder of Salisbury Plain is the great stone circle of Stonehenge. It is the oldest monument in our land, but how or when it was set up nobody knows. All over the chalk downs we can find the remains of Britons who lived in the days when the world was young.

10. From Salisbury Plain we might turn south and follow the course of the river Avon which runs into the English Channel, not far from the pretty seaside town of Bournemouth. Between the Avon and Southampton Water lies the New Forest, a tract of gravel and clay like the Weald, but much more thickly wooded. The New Forest, which was new in the days of William the Conqueror, is one of the old royal woodlands of England, and more than half of its hundred square miles still belongs to the Crown.

11. Most of the forest is true woodland, with many fine oak trees and beautiful green glades. Here and there, however, we find stretches of open heath and marsh. Scattered over the district we find many little towns and hamlets whose names figure in English history. While the Downs speak to us of the days *before* history, the New Forest tells us of the time when our history was beginning.

12. You may form a good idea of the New Forest from the beautiful painting which forms the frontispiece to this book. The wild ponies which you see in the picture are being driven into a pen in order that some of them may be picked out for market.

## 15. THE THAMES VALLEY.—I.

1. From the crest of the North Downs we can look north and north-west along the valley of the Thames, the most important river of England. Why is the Thames so important? If you look at the map, you will see that its broad estuary opens out towards the continent of Europe, which is only sixty miles away. The estuary of the Thames seems to say to the merchants of Europe, "This is the gate of England ; enter here."

2. Now let us find the source of this famous and beautiful river, and follow its course from its beginning to the sea. Our map shows us that the infant river begins in a number of streams which descend from the Cotswold Hills. You will remember that these hills are built up of limestone.

3. It is said that the Cotswolds get their name from the sheep "cotes" or shelters found on them. A famous breed of sheep is still reared on the Cotswolds. The best place from which to visit the hills is the beautiful "garden town" of Cheltenham, which stands on the western side of the Cotswolds.

4. Looked at from Cheltenham the hills form a high ridge. When you ascend them you find yourself on a tableland that slopes gently to the south-east. On this slope, three miles from the town, are the Seven Springs which give birth to the river Thames.

5. The river is, of course, very small at first, but it soon receives feeders and grows in size. It flows as a clear stream over the limestone country, through rich meadows



and past quiet villages. At Lechlade, where it is joined by the Colne, it becomes deep enough for barges. All the way from Lechlade to London there is a towing-path by the river.



OXFORD AND SOME OF ITS COLLEGES.

1. High Street. 2. Magdalen College. 3. Exeter College, Sheldonian Theatre, and Clarendon Building.  
4. All Souls' Cloister, with St. Mary's and Radcliffe Library. 5. Balliol College.

6. After Lechlade the river bends north till it washes the borders of the great park of Blenheim, which was given by the nation to the great Duke of Marl-

borough. Then it turns southward again and reaches Oxford.

7. There is no place in the world quite like Oxford. A great poet has described it as "the sweet city of the dreaming spires." There are ugly streets in it, and parts of it look like a London suburb; but these faults are forgotten in the beauty of its High Street, and in noble colleges set among lawns and gardens which have been tended for six hundred years.

8. The first Oxford College is said to have been founded by King Alfred, but all we know for certain is that the place was a seat of learning as early as 1214. There are twenty-one colleges, besides several smaller halls, and the names of all are famous in the history of learning. The most beautiful, perhaps, is Magdalen College, which stands on the river Cherwell, a little stream which joins the Thames at Oxford. Its cloisters and lawns and gardens have for hundreds of years been the resort of poets and scholars.

9. Some three thousand young men live in the different colleges. These students are as fond of play as of work. They take their pleasures in the cricket and football fields, on the running track, and especially on the river. Oxford is famous for its rowing. Along the river banks lies a line of house-boats, belonging to the colleges. These house-boats are the headquarters of the different college rowing clubs.

10. On a summer afternoon you will see the eight-oared boats flashing along the stream. College competes with college in races twice a year, and once a year the best



Oxford oarsmen row a race with the best Cambridge oarsmen on a reach of the Thames a few miles above London.

11. From Oxford the Thames flows to the south and breaks through the chalk ridge of the Chiltern Hills. At Reading it receives the Kennet from the Marlborough Downs. Reading is an old town, now famous for its biscuit factories and its great nursery gardens, which cover an area of more than fifteen square miles.

12. After Reading we reach Henley, a pleasant town where boat races are held every summer. During the week of the races the river is alive with all kinds of craft, and lined with gay house-boats. We are now passing through some of the loveliest scenery in England, with woods covering the hills, and trim lawns running down to the water's edge.

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## 16. THE THAMES VALLEY.—II.

1. Now the towers of Windsor Castle are seen rising above the trees, and soon the castle itself is in full view. It stands on the summit of a low hill. The royal standard floating at the top of its highest tower shows us that it is one of the homes of our King. The oldest parts of the castle were built by William the First.

2. The town of Windsor clusters round the castle, which stands close to the Home Park. A beautiful road bordered by elms for three miles leads to another park called Great Park. East of this "Long Walk" stands the chapel in which Queen Victoria and her husband are buried.



**Windsor Castle.**  
*(After the picture by John Syer.)*



3. On the opposite bank of the river is Eton College, a great school for the sons of noblemen and gentlemen. Many of the greatest of our statesmen and soldiers were once Eton boys.

4. A little below Windsor, on the right bank of the river, is a meadow, now a racecourse, which is one of the most famous places in all the land. On this meadow of Runnymede, or on the little island in the river, the barons in the year 1215 forced King John to sign what is known as Magna Charta. By signing this paper King John agreed that thenceforth he would not rule according to his own will, but would keep the law as set forth in the Charter.

5. Lower down the stream, and quite close to it, is a fine old building known as Hampton Court Palace. It was built by Cardinal Wolsey, who presented it to his master, Henry the Eighth. The grounds are laid out in terraces, flower-beds, and shady walks, and at holiday times are much visited by Londoners.

6. The Thames now reaches Teddington—that is, the tide-end-town. Its name shows that it is the highest point on the river reached by the tide. The water which most Londoners drink is taken from the Thames above Teddington. From this point onward the water of the Thames is no longer fresh but salty.

7. We now reach the pleasant river-side town of Richmond, in which live many people who do their daily work in London. The scenery of the river at Richmond is very beautiful, and the banks are lined by trees to the water's edge. Alongside the river are the fine gardens of Kew, with trees and plants from all parts of the world.

8. Near Kew is Putney, where the boat-race between Oxford and Cambridge takes place every year. The race is rowed up-stream from Putney to Mortlake. Tens of thousands of Londoners make holiday on boat-race day, and show a keen interest in the struggle.

9. The Thames is now no longer a country stream flowing through meadows, past woods, country houses, and quiet villages. It has entered London, and its shores are lined by warehouses and wharves, and by great public buildings.

10. On we go under bridges and over tunnels, through the most crowded city on earth. After passing Tower Bridge we reach the docks, which are always full of shipping.

11. Opposite the Isle of Dogs, where we see the West India Docks, stands Greenwich. The fine building facing the river is Greenwich Hospital, now a home for old sailors and a naval school. It is a very interesting place, and contains many pictures and models of ships.

12. On the top of the hill is the Royal Observatory, from which telegrams are sent every day to all the large towns of Britain at the moment of noon. Look at your map and find the north and south line which is marked 0. This is called the meridian of Greenwich. It passes through the observatory, and marks the position from which longitude—that is, distance on the earth east or west—is measured.

13. Lower down on the same bank of the river is Woolwich, where there are great Government workshops in which cannon, gun-carriages, and other implements of war





**Boulter's Lock.**

*(From the picture by E. J. Gregory, R.A., P.R.I. By permission of W. H. Lever, Esq.)*



are made. As we journey on to the sea we see here and there the forts which protect the river-mouth.

14. The Thames now grows wider, and flows between broad marshes which in many places are below high-water level. Great banks have been made in this part of the river to keep out the inflowing sea. At last we reach the Nore Lightship, and here the river ends and the North Sea begins.

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## 17. DEVON AND THE WEST.—I

1. We have now visited the "Down Country" and the pleasant valley formed by the Thames and its tributaries. To-day we are to travel in that western peninsula of England which consists of the counties of Devon and Cornwall. Both in scenery and in the character of their people these counties form a little kingdom quite distinct from the rest of Britain.

2. If we walk westward from Salisbury Plain, we shall soon come to the limestone districts of West Dorset and Somerset, and see the Mendip Hills with their lead mines, and the Quantocks with their quarries. When, however, we cross the river Exe, we find ourselves in a new region altogether. We have left the chalk and limestone, and have come to the sandstone.

3. A large part of Devonshire consists of what is known as Old Red Sandstone. In Book II. I told you that sandstone was nothing but grains of sand bound together by pressure or by some cementing material. The sandstone which is found so largely in the middle of England is called



the New Red Sandstone. It is younger than the coal measures, and crumbles readily into red earth.

4. The Old Red Sandstone which is found so largely in Devonshire is, however, older than the coal measures. Since it was laid down under water, ages ago, it has been so pressed and heated that it has become hard and something like a fire-formed rock. You must not imagine that all the rocks of Devonshire are Old Red Sandstone. The Devonian rocks contain much sandstone, but consist of beds of slate and limestone as well.

5. Devon in shape is not unlike a queerly-shaped pan, with the broad edges formed of hard Devonian rock. You may think of Cornwall as the long, crooked handle of the pan. If we visit the north rim of the pan, we shall find a broad belt of Old Red Sandstone running right along the edge of the Bristol Channel. This belt includes the wild upland of Exmoor, of which you can read in the well-known story "Lorna Doone."

6. Exmoor is a country of rounded hills and shallow valleys, with wide stretches of peat-bog and moor between them. Some of the "combes" are very pretty, and richly wooded, but the moor itself is almost treeless. Large numbers of sheep and ponies graze on the scanty grass, and red deer are still hunted on horseback.

7. As the valleys draw near to the sea they become deeper, and the hills reach the water's edge as splendid red cliffs. The climate is mild and damp, and the shore is fringed with beautiful woods. At the mouth of each valley we find a little town, such as Minehead, Ilfracombe, or Lynmouth.

8. This kind of country stretches west till we reach the mouth of the river Taw and the town of Bideford, famous for its sailors in the days of Queen Elizabeth.

9. Devonian rocks begin again in Cornwall, where the peninsula is much narrower. There we find the same bluff headlands and wild moorland country. A backbone of hill



LYNMOUTH.

runs down the centre, and in the summit of Brown Willy reaches a height of 1,375 feet.

10. But as we get farther west, to the very end of the handle, the rock changes, and with it changes the scenery. Granite, you remember, is one of the oldest rocks, and has been formed by fire. It is very hard, and its great pillars and cliffs resist the Atlantic waves where a softer rock



would have crumbled. The western point of Cornwall is chiefly granite.

11. It is this fact which makes the cliffs of South Cornwall and Devon so striking and the bays so deep. The cliffs are formed of the hardest rock. It has resisted the battering of the waves, while the bays have been cut into the newer and more yielding Devonian rocks. Plymouth, Devonport, and Dartmouth stand on deep bays like the fjords of Norway, and their harbours are among the best in England.

12. At Land's End we turn the corner and follow the south coast. It resembles the north coast, being for the most part a broad belt of Devonian rock. But there is one great difference. Humps or bosses of the old fire-formed rocks appear every now and then, and these form bold peninsulas such as the Lizard and Start Point.

13. The people of Cornwall are mainly Celtic in origin. This means that they are descended from the old inhabitants of England, who were never driven out by the Saxons and Danes. The Cornish people used to speak a language which was not unlike Welsh. This language only died out in the eighteenth century.

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## 18. DEVON AND THE WEST.—II.

1. South Devon is one of the loveliest parts of England. The mild winds from the sea make it a paradise of flowers and fruits. It is a country of low, swelling hills, rich meadows, and flowery lanes sunk deep in the red soil. In Devonshire you will find some of the best orchards in the world.

2. Along the coast there are many little fishing villages. From the earliest times Devon and Cornwall have been famous for their fishing. Devon fishermen formed the crews of the ships that sailed to the Spanish Main, and their captains came chiefly from the old country houses among the Devon hills. The names of Sir Walter Raleigh, Sir Francis Drake, Sir John Hawkins, Sir Richard Grenville, and Sir Humphrey Gilbert show the part that Devon has played in the history of England.

3. Cornwall has many kinds of rock, and in them tin and copper ore are found in large quantities. The mines of tin have been worked ever since the days when the merchants of Tyre and Sidon landed on our coasts. The crumbling of the granite has produced china clay, and that is why in the eighteenth century Plymouth and Bristol, two west-country cities, made the only British china which could compare with the fine porcelain of the East.

4. We have seen the edges of the pan and its handle, and now we must look at the middle. From Exmoor, on the east, to the Cornish moors, on the west, there runs a broad belt of limestone. This is the great plain of Devon, and it is watered by the Tamar on the west, flowing to the English Channel; and by the Torridge and the Taw, which run into the Bristol Channel.

5. This plain, with its heavy rainfall and mild climate, is one of the richest pasture grounds in Britain. It is famous for its cattle-rearing, and from it come the Devon cattle, which are now found in all the stock-raising countries of the world.





VIEWS ON DARTMOOR.

6. South of the Devon plain rises the upland of Dartmoor, the largest of all the great humps of granite. The best way to reach Dartmoor is to ascend the vale of one of the little rivers, such as the Dart, which flow from it to the English Channel. Near the coast we find a broad.

wooded valley, with green meadows on either hand and fine old houses set among trees. Soon the stream grows more rapid, the hills draw nearer, and we are in a mountain glen. At last we reach the high moor, and find the Dart a moorland stream, falling over granite rocks into amber-coloured pools.

7. All round, as far as the eye can reach, is a range of low hills, with a few rocky peaks rising above the general level. These peaks are called the Tors, and their summits are generally masses of weather-beaten granite. In some parts the granite has crumbled into clay, and this forms peat bogs and mires in which unwary travellers have often come to grief.

8. Now I think you understand why I called Devon and Cornwall a little kingdom by themselves. No other English counties can show such a variety of scenery. You may wander in rich meadow or barren moors; you may stand on desolate sea-cliffs battered by ocean rollers, or look down on quiet land-locked bays which look like lakes in a park.

9. There is just as great a variety, too, amongst the people. There are shepherds on the hills, underground workers in the mines, fisher folk on the seashore, and fruit-growers on the plains. With all this richness and variety, it is no wonder that Devon and the west have given so many famous men to the service of their country.

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## 19. THE MARCHES OF WALES.

1. Look at the relief map on page 34. You will notice at once that Wales is a mountainous land. It is also the oldest part of South Britain. Ages ago it was a lofty plateau. The hammers and chisels of nature have been at work for countless years, and have carved deep valleys out of this plateau. The mountains are simply the tough ancient rocks which have been worn away less rapidly.

2. In Wales, especially in North Wales, we find some of the most ancient rocks known. Snowdon and the summits which surround it consist of fire-formed rocks. Slate—which, as you know, is simply mud which has been greatly changed by heat and pressure—is also largely found. Both in the north-east and in the south we find coal measures laid down in basins or troughs. The Black Mountains and Brecon Beacons of South Wales consist of Old Red Sandstone.

3. Between the soft rock of the Central Plain and the hard rocks of Wales we should expect to find great valleys; for rivers, as you know, rise in the hills, and, flowing down to the lowlands, cut valleys for themselves out of the softer rock. Look at the map again, and you will see that the marches or borders of Wales are made up of two great valleys.

4. From the Bristol Channel the Severn valley extends north and north-west for more than half way. Then we cross the watershed, and the Dee, coming down from the hills, carries us north to the Irish Sea. If we ascend the first valley and descend the other, we shall cover the whole of the Welsh borderland or marches.



**The Wye near its confluence with the Severn.**  
*(From the picture by C. E. Johnson, R.I.)*





tary. This is the beautiful river Wye, which flows down from the Welsh mountains, and rises not far from the source of the Severn. It runs through the wooded valleys and past the apple orchards of Herefordshire. Fishing in the Wye is often carried on from a coracle—that is, from the same kind of boat which the ancient Britons used. Skill and experience are needed to keep the coracle from upsetting in a swift stream.

8. We are now in the mouth of the Severn. It is not an easy place to navigate, for it is full of sand-banks, and the tide flowing from the broad Bristol Channel into the narrow river forms a “bore,” or wave, which sometimes rises to six or seven feet high. Boatmen give warning of its approach by shouting “Flood-o! flood-o!” Those who are not prepared for the incoming “bore” may easily have their boats capsized.

9. As we sail up the broad stream we have the county of Gloucester on both banks. On the left hand is a coal-field known as the Forest of Dean, part of which is still covered with fine oak and beech trees, though there are no longer any deer within its bounds. The forest belongs to the Crown, and its timbers were much used in the royal dockyards in the days of our “wooden walls.”

10. We now see on our right hand the docks of Sharpness, from which a ship canal runs to the city of Gloucester, seventeen miles away. Gloucester is one of the oldest towns in the country, and, like Manchester, is now an inland seaport because of its canal. At Sharpness one of the main lines to South Wales crosses the Severn by a fine railway bridge of twenty-eight arches.



11. From Sharpness we continue our journey on foot, for we are at the end of the tidal water. After a pleasant day among the Gloucestershire meadows we reach Tewkesbury, which is famous for its fine abbey. Here we find a large river flowing from the east. This is the Warwickshire Avon, which comes down through the heart of England, past Rugby, and Warwick, and Stratford where Shakespeare was born. We shall visit its valley later.

12. We are now in the rich plain of Worcestershire, and see on the left hand a ridge of hills. It is the Malvern range, which divides the valley of the Severn from that of its tributary the Wye. These hills are formed of hard slate rocks like those of North Wales, and on their slopes are several health resorts, where visitors flock to enjoy the clear, bracing air, and to drink the mineral waters. All around us we see apple and pear orchards and hop-fields. Thousands of tons of fruit and hogsheads of perry and cider are exported from this district every year.

13. The next town we reach is Worcester, which the Cavaliers used to call "the Faithful City," because it was loyal to King Charles during the great civil war. Here Cromwell won the battle which he called his "crowning mercy." Worcester is an ancient town with a noble cathedral. Its chief industries are the making of fine porcelain, gloves, and the famous Worcestershire sauce.

14. As we follow the river we skirt the edge of the Black Country of South Staffordshire, and pass near Kidderminster, which has been famous for its carpets for two hundred years. For some miles we now pass through a coal and iron district. Then we enter the rich agricult-

tural country of Shropshire, and see to our left the long ridge of upland called Wenlock Edge. To our right rises a solitary hill, the Wrekin, on which in old days beacons were placed to summon the men of the Welsh marches.

15. Soon we reach the old town of Shrewsbury, where the river is spanned by five bridges. Shrewsbury is the county town of Shropshire, and a great market centre for the farming country around. It has many old buildings, including its castle, which from the earliest days of our history was one of the chief border fortresses of West England.

16. After Shrewsbury the river valley turns to the west into the hills of Wales. The source of the Severn is found in a little lake on the east side of Plinlimmon, the loftiest summit of mid-Wales. In its upper course it passes Newtown and Welshpool, where Welsh flannel is manufactured from the wool of the Welsh mountain sheep. Below Welshpool it is joined by the Vyrnwy. On this river a huge lake has been made to supply Liverpool with water.

17. If we continue our course north along the great trough of the Welsh marches, we pass the little country town of Oswestry, and presently reach the river Dee, which descends from the Welsh hills. We next pass the town of Wrexham, which is the centre of an important coal-field. Soon we are among the meadows of Cheshire, famous for their rich pastures. From the milk of the cows which feed on these meadows the famous Cheshire cheese is made.

18. The last town we pass is Chester. After the Dee leaves its ancient walls it expands into a large estuary, which runs north-west to the Irish Sea.



## 20. A LITTLE TOUR IN NORTH WALES.

1. Lovers of mountain scenery find a happy hunting-ground in the Lake district and in North Wales. We have already seen something of the fairyland which lies between the Solway Firth and Morecambe Bay; let us now make a little tour in North Wales.

2. We already know that two-thirds of England is less than five hundred feet above the level of the sea. Most of Wales is more than six hundred feet high, and the part of it which we are going to visit is well over one thousand feet. North Wales is a lofty mountain country, with deep shut-in valleys, and a narrow belt of lowland fringing the sea.

3. If you study a map of Wales, you will find that this rugged little land can only be entered from England by three valleys—namely, along the Dee, the Severn, and the Wye. So mountainous is the country that a land journey from Carmarthen in South Wales to Carnarvon in North Wales can only be made by following the coast-line, or by taking train along the English border to Chester, and then travelling by the coast road of North Wales.

4. We are not going to travel along the coast road from Chester, but we will take a steamer from Liverpool and land at the beautiful seaside town of Llandudno. It stands on a little bay shut in by two headlands, the higher of which is called Great Orme's Head. A cable railway takes us to the top, from which we can see mile after mile of rugged mountains.

5. We descend from the Great Orme, mount our bicycles, and after a run of a few miles reach the mouth of the

river Conway, which is spanned by a bridge hung on chains. On the other side of the bridge stands the ivy-covered ruin of Conway Castle, which was built by Edward the First when he was conquering Wales.

6. We cross the bridge, run through the little walled town, and follow the narrow coast road by the side of the railway. For many a mile we have the mountains on our



MENAI STRAIT AND ITS BRIDGES.

left hand. We pass a number of pretty watering-places, and find ourselves on the shore of the Menai Strait.

7. On the other side of the strait are Puffin Island and the far larger island of Anglesey. At Bangor we pause to visit the cathedral, and to see the twin bridges that span the strait. One of them is hung on chains, and quivers beneath our feet as we cross it. The other is an immense



iron tube through which the train rattles on its way to Holyhead.

8. On we go, and after a pleasant ride reach the old town of Carnarvon, with its gray castle by the water's edge.



BETHESDA SLATE QUARRY.

In this castle, you will remember, the first Prince of Wales was born. By the side of the castle we see a number of little coasting vessels being loaded with slates.



9. Now we push inland, and in less than an hour we are at Llanberis, where the mountains are quarried for slate. Five miles to the north of us, at Bethesda, are the most famous slate quarries in the world. Bethesda slate is so hard and strong that it is

sent to foreign countries as well as to all parts of the British Isles.

10. A long climb up the Llanberis Pass brings us to the best place for an ascent of Snowdon, the king of Welsh mountains. If we are lame, or tired, or lazy, we can climb the mountain comfortably seated in a train.

11. Snowdon is the loftiest mountain of South Britain. It rises to a height of nearly three thousand six hundred feet, and around it are several peaks very nearly as high. From the summit on a bright, clear day the view is glorious. We look down upon narrow valleys, each with its lake or flashing stream. Away to the west we catch a glimpse of the Irish mountains. Landward we see numbers of lesser mountain ranges, like green billows one behind the other.

12. We now "coast" down a beautiful pass, skirt the margins of two lakes, and come to the little village of Beddgelert, with the remains of its Roman bridge. A ride through another lovely pass brings us to a little port which is busy exporting slates, and then we find ourselves on the shores of Cardigan Bay.

13. A few miles further on we see Harlech Castle overlooking the marsh land that lies between the road and the sea. On we go, and in due course reach the quaint seaside town of Barmouth, at the mouth of the Mawddach. The old part of the town is built on the terraces of a hill, which is so steep that you can stand at the door of one house and look over the roof of the next below.

14. We now leave the coast and continue our ride by the side of the Mawddach. Scarcely anywhere in Great



Britain can we see finer scenery. For ten miles our eyes are charmed by lovely pictures of wood, water, and mountain. On our right is Cader Idris, or Arthur's Chair, a mountain only six hundred feet lower than Snowdon. From its top the mountain of Plinlimmon, in which the river Severn has its source, can easily be seen.

15. A long climb from the little town of Dolgelly brings us to the watershed between the Mawddach and the Dee. Not far from the road we find one of the springs which give birth to the Dee. After following this stream for a few miles we suddenly see a large lake spreading out its waters before us. This is Bala Lake, a fine sheet of water three and a half miles long.

16. We follow the Dee as it issues from the lake to Corwen, where we notice sportsmen waist-deep in the stream fishing for salmon. Now our road swings to the east, and a beautiful ride through a narrow tree-fringed valley brings us to the little town of Llangollen.

17. We cannot pause, much as we would wish, to enjoy the beauties of this lovely vale, but must push on through Wrexham to Chester, where our little tour comes to an end.



## 21. THE HEART OF ENGLAND.—I.

1. The great Central Plain, which we have called the heart of England, is bounded on the west by the Welsh mountains, and on the east by the ridge of limestone which runs in a north-east direction from Portland Bill. Look at the map and find the Peak district of Derbyshire. These hills are the northern boundary of the Central Plain, and the ridge south of the Thames valley is the southern limit.

2. This great plain is chiefly composed of soft water-formed rocks, which, as rocks go, are not very old. They are of various kinds, but we may call them by the general name of the New Red Sandstone. Here and there we find coal-fields and busy manufacturing towns, which we shall consider when we come to speak of our industries. For the present we will only look at the rural districts.

3. You will see from the map that the plain is watered by four rivers. We see the Thames on the south, the Warwickshire Avon on the west, the Trent on the north, and the Great Ouse on the east. The Ouse and the Avon rise in the Central Plain, the Thames in the Cotswold Hills, and the Trent in the hill country of Staffordshire.

4. A valley of the plain is not like a valley of the mountain region. It is so flat that you do not realize it is a valley at all. The watershed which separates it from the neighbouring valley is often a ridge so low that it looks little higher than the rest of the plain. Hence all the streams are slow-flowing. They are fringed with flags and rushes, and are often muddy in colour. Flowing through



rich soil, they have not the clearness of a mountain stream which runs over gravel and rock.

5. We have already visited the Thames valley, so we will cross the Cotswolds to the Avon, which we saw was a tributary of the Severn. The woodland scenery of the Avon valley is remarkable for its beauty. The river rises in the grassy country on the eastern border of Warwickshire—a country which is famed for its fox-hunting. The first town of note on its banks is Rugby, where stands the famous school about which you may read in “Tom Brown’s Schooldays.” Lower down in the valley is Coventry, where to-day bicycles and motor cars are manufactured.

6. Then we come to the county town of Warwick, with its wonderful old castle rising above the river. Two miles distant is the pretty garden town of Leamington; and eight miles away is Kenilworth Castle, now a ruin, but once the favourite resort of Queen Elizabeth.

7. Eight miles lower down we come to Stratford, where Shakespeare, England’s greatest poet, was born and died. We can still see the house where he lived, and many things which remind us of the poet. The river now flows through what was once the Forest of Arden. Its scenery was described by Shakespeare in one of his most famous plays, *As You Like It*.

8. The river now enters the rich valley of Evesham. This is one of the largest market-gardening centres in England. Hundreds of small farms have, by skill and patience, been turned into gardens, which produce some of the best and earliest vegetables in the country. A little lower, after

a course of less than sixty miles, the Avon mingles its waters with those of the Severn.

9. We next journey north to the edge of the Derbyshire hills, where the river Trent has its source. It begins as if it meant to flow to the Irish Sea, but turns to the east instead, and skirts the southern side of the Peak district.

10. Early in its journey it passes through the busy manufacturing district called the Potteries. All along the river we see coal-pits, smelting furnaces, and iron works, as well as the curious chimneys of the works where chinaware and earthenware are made. Most rivers pass through industrial districts late in their course, but the Trent begins in a black country before it finds its way into clean English fields.

11. Hanley is the largest town of the Potteries. A hundred years ago it was a mean village; now it boasts several fine public buildings, and is lighted by electric light. Burslem, which stands at a little distance from the river, is the oldest of the Pottery towns: it is mentioned in Domesday Book. Stoke-on-Trent manufactures iron and steel, as well as earthenware of all kinds.

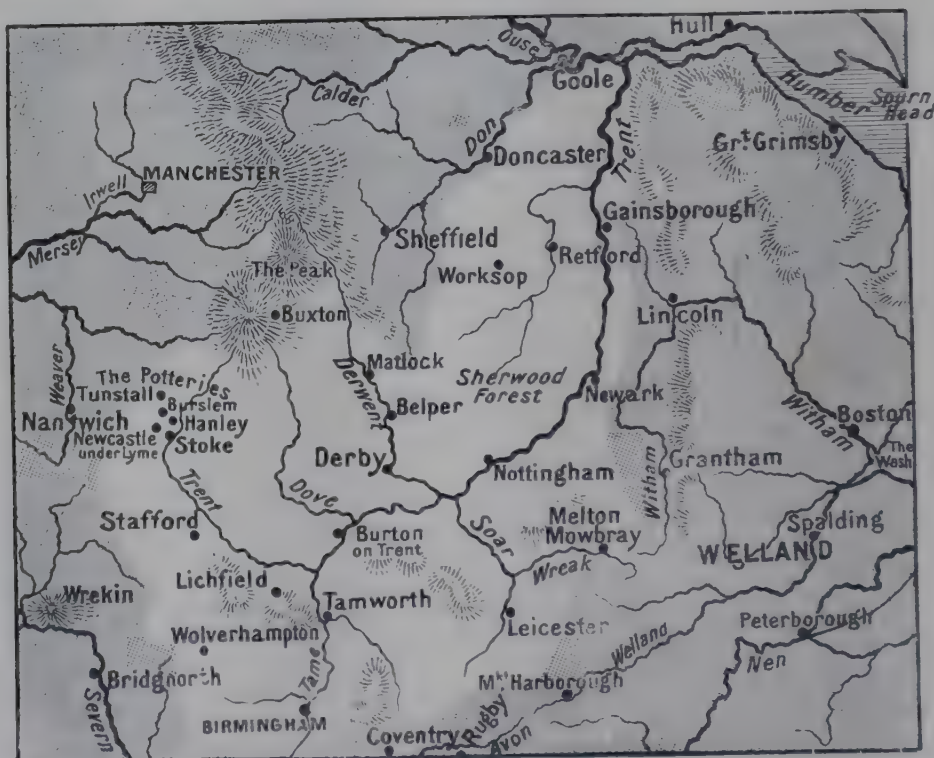
12. Before it leaves the Potteries the river passes through the grounds of Trentham Hall, which has been offered by the Duke of Sutherland as a place of resort to the people of the Pottery towns. Throughout the valley of the Trent we find many of "the stately homes of England." The Trent now receives its first important tributary, the Sow. It comes from beyond the county town of Stafford, where boots and shoes are made.

13. Soon the Trent approaches the edge of a wild moorland country known as Cannock Chase. This was once a



famous hunting ground; but now the trees have disappeared, and many collieries and iron mines have been opened. Presently, over the grassy meadows, appear the roofs of the old cathedral city of Lichfield. The Trent then flows slowly on, through a fringe of reeds, past farmhouses and the gray towers of village churches.

14. Now the valley broadens out, and we see chimneys



THE TRENT.

rising from the plain and the sky darkened with smoke. We are nearing Burton-on-Trent, the largest beer-brewing centre in the country. It is said that Burton ale owes its fame to the Burton water, which contains salts of lime. The breweries employ several thousands of workmen, and one brewery covers more than one hundred and forty acres.

15. A few miles below Burton the river is joined by the Dove, which comes down from the heather-clad hills above

the health resort of Buxton. This is one of the loveliest rivers in England. Dovedale, the upper part of its course, is a narrow glen, where tall limestone cliffs, draped in green, fall sheer to the rocky bed of the stream.

16. The next tributary of the Trent from the north is the Derwent, which comes from the same region as the Dove. On it and its tributaries stand several of the greatest houses of England, such as Chatsworth, the Duke of



HADDON HALL.

Devonshire's seat, and Haddon Hall, which belongs to the Duke of Rutland. The latter is one of the most perfect old English homes in the country. In its halls, courtyards, and gardens you can easily imagine yourself living in the days of good Queen Bess.

17. Later in its course the Derwent runs through deep limestone gorges, and passes a group of little towns, of which Matlock is the chief. The cliffs, the beautiful river,



the green hills and woods, the deep caverns, and the mineral springs of Matlock attract many visitors in summer.

18. Lower down stands the town of Derby—the *by* or town of the deer. The coat of arms of the town shows a deer in a park. Derby is the headquarters of the Midland Railway Company, which employs thousands of men in its engine and carriage works. The first silk mill in England was set up at Derby, and silk is still made there. Its most famous manufacture, however, is the beautiful porcelain called Crown Derby.

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## 22. THE HEART OF ENGLAND.—II.

1. After it is joined by the Derwent the Trent receives on its right bank the Soar, which comes from Leicestershire. On this river stands the town of Leicester, the home of many boot factories. Following the main river we reach Nottingham, the chief town in the Trent valley. Crowning a steep rock is the castle, now an art gallery and museum. Nottingham is celebrated for its lace curtain and hosiery manufactures, which employ more than 25,000 people.

2. On the left bank of the river for many miles we find the famous Sherwood Forest, once a hunting-ground of the kings of England and the headquarters of Robin Hood and his merry men. Though the forest has almost disappeared, the country remains well wooded, and some of the trees which sheltered Robin Hood may still be seen. All around near the town of Worksop are great parks and country

houses, and as four dukes live in the district, it is known as the "Dukeries."

3. The Trent valley is now so broad that it is really a plain. The next town we pass is Newark, with a castle which was once the most important fortress in Nottinghamshire. Newark has also a great corn market and brass and iron foundries. In the old coaching days it was one of the chief halting places on the great North Road from London to Scotland. A hundred years ago its chief inn, the Saracen's Head, was one of the busiest in the country.

4. The Trent is now flowing due north, and the country is flat and uninteresting. At Gainsborough the river becomes tidal, and an important waterway of traffic. Long before it joins with the Yorkshire Ouse to form the Humber it has left the scenery of the heart of England and entered the eastern levels.

5. The last river of the Central Plain is the Great Ouse, which rises near Banbury, in Oxfordshire—a name familiar to children because of the nursery rhyme about its cross and the cakes called after it.

6. The word "Ouse" is an old Celtic name for a river which "oozes" its way to the sea. The Ouse is the most winding of all streams. There seems no reason why it should flow one way rather than another through this flat plain. Its scenery is the true scenery of the Central Plain—rich meadows dotted with stately trees, and bordered by hedgerows overgrown with flowers.

7. One of the first towns it passes is the quiet county town of Buckingham. Later it reaches Bedford, where John Bunyan wrote "The Pilgrim's Progress." Much



of the landscape of that famous book is taken from the meadows of the Ouse.

8. Bedford has many excellent schools, and its machinery works employ many hands. Straw-plaiting is also carried on, and there is a large trade in grain, much of which is



THE OUSE BASIN.

carried along the river in barges. Below Bedford the river flows through Huntingdon, famous as the birthplace of Oliver Cromwell. You will remember that he was one of the greatest of English generals, and the ruler of England after Charles the First was beheaded.

9. We are now on the verge of the Fen country, where

the river has been taken in hand by engineers and banked up, to prevent it from overflowing and flooding the fields. By this we know that we have left the Central Plain, and have reached the curious flats of Eastern England, which we shall visit in our next lesson.

10. In our journeys we have frequently spoken of shires and county towns. What do we mean by these words? England is divided into forty counties or shires, and Wales into twelve. A shire simply means a piece of country "shorn" off, and a county is that part of the land which was formerly ruled by a count. To-day "shire" and "county" mean the same thing, and the old division has been kept up for purposes of government. The headquarters of government in each county or shire is called the county town.

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### 23. FLATS AND FENS.

1. We have seen that a chalk ridge runs from Dorsetshire north-east across England to the eastern side of the Wash. Running north-east from the Thames valley, between this chalk ridge and the sea, lies a broad belt of sand and clay, which was formed while the east of England lay under a shallow sea. This broad belt forms the Flats and Fens of Eastern England—or East Anglia, as it is sometimes called.

2. If you look at the map, you will see that the coast of East Anglia, from the mouth of the Thames northward, is cut up by the mouths of little rivers. It was in these creeks that the Danes, the Jutes, and the Angles frequently



landed. They found waterways which allowed their ships to travel a long way inland. Large numbers of Danes settled down in this part of England, and we find to this day that the people of East Anglia resemble the Danes in many ways.

3. We will begin with the county of Essex, which lies north of the Thames estuary. On its inland side it touches the chalk belt and rises and falls in wooded hills. There rise the streams which flow eastward to the sea. The larger part of the county, however, is quite flat, and the rich soil is excellent for crops of grain and vegetables. There are several colonies in Essex where little farms are cultivated in the French fashion, and yield great supplies of market-garden produce.

4. The coast is a network of creeks and bays. The chief river is the Blackwater, near the mouth of which stands the town of Chelmsford. Farther north, also near the coast, is the old Roman city of Colchester, where famous oyster beds have existed for two thousand years.

5. As we go north we cross the river Stour, which forms an estuary along with the river Orwell. We are now in the county of Suffolk. Suffolk has the same general character as Essex, being hilly inland and flat towards the sea. The coast, however, consists more of sand than of clay, and shows many tracts of heath and down. Several towns and villages on the coast are well-known bathing resorts—such as Lowestoft, Southwold, and Felixstowe.

6. As we follow the shore we cross the little river Waveney, and reach the town of Yarmouth, which stands at the mouth of the river Yare. We are now in Norfolk,

one of the great wheat-growing counties of England. As in Suffolk and Essex, the centre is part of the chalk belt. Here also we find wide stretches of heath and down. The northern coast is a series of sand-hills, on which stand Cromer and other well-known pleasure resorts.

7. The county town of Norfolk is Norwich, a busy manufacturing city on the river Yare. At one time Norwich made more worsted than any other place in England. Now the worsted trade has gone, but the town still makes crape. It is also noted for its great mustard factory. Much of the mustard is grown in the Fen district. Boots and shoes are also manufactured.

8. The keep of a Norman castle still remains, and at its foot a busy market is held. Some of the old buildings round the market-place are very interesting. The cathedral stands on low ground by the river, and was founded at the close of the eleventh century. Close by is the old grammar school which Lord Nelson attended when a boy.

9. On the lower courses of the Yare, and of the other rivers, such as the Waveney and the Bure, which unite near Yarmouth, we find the region known as the Broads. These are large, shallow lakes, connected with the rivers by little channels called "dykes." All around them are reedy swamps, and land which has been reclaimed from the water. The landscape of the Broads, like the landscape of most of the east of England, is very like what we see in Holland and in Belgium. In summer the Broads are covered with pleasure boats and small yachts which can sail in shallow water; in winter they are the chief haunt in England of wild fowl.

10. Norfolk is full of great houses, such as Holkham



Hall, which belongs to the Earl of Leicester (and which is supposed to afford the best shooting of any estate in England) ; and Sandringham, a favourite residence of His Majesty King George.

11. The scenery of the east of England, though not bold or grand, is very pleasing. From its very flatness it gives the traveller a sense of space and freedom. In a mountain country we see the sky only as a ribbon between the two sides of the valley, but in a plain we are given the whole arch of the heavens. Perhaps that is why the great landscape painters of England, such as Constable and Crome, have all come from the east.

12. Before we leave this district we must cross over the northern part of the belt of chalk and look at the lower course of the Great Ouse. In the last lesson, you remember, we followed its upper waters. Below Huntingdon the Fen country begins, and the district may be said to include the whole land round the Wash, which is the basin of the rivers Ouse, Nen, Welland, and Witham. Most of the Fens are in Cambridgeshire and in Lincolnshire.

13. Had these rivers been allowed to flow as they pleased, they would have been constantly overflowing and flooding the country. Hence it has been necessary for engineers to take them in hand, both to save the farmers' crops and to make them useful waterways. High earthen banks have been built to prevent them from straying. Often the bed of a river is on a level with the surrounding meadows. The water in the drains on the low-lying land is lifted into the river by powerful steam pumps. Canals have also been cut to help traffic.

14. The result is that where once there were nothing but shallow lakes and sedge and wild fowl, there are now many miles of rich grain-growing land and market gardens. The Thorney estate in Cambridgeshire, which was drained by the Duke of Bedford, and which has been cut up into small holdings, is an example of what can be done with land reclaimed in this way.

15. Before we leave Cambridgeshire we must visit the university city and county town of Cambridge. It stands on the Cam, a little tributary of the Ouse. Oxford has been called a town in a university, and Cambridge a university in a town.

16. The grand old colleges at Cambridge stand together, and their "backs" come down to the water's edge. The Cam flows by them, under many bridges and past many beautiful lawns. It is so shallow that it has to be dredged to make it fit for boating.

17. On the banks of the Ouse, fifteen miles from Cambridge, is the city of Ely, or "eel isle," which is so called because eels used to abound in the neighbouring waters. Ely stands on an "island" of hard, firm ground in the midst of what used to be marshes and meres. You will remember that Hereward the Wake made his last stand against William the Conqueror on the Isle of Ely.

18. Ely contains a beautiful cathedral, which crowns the highest part of the island. Its towers can be seen over many a mile of flat and fen.



## 24. THE BACKBONE OF ENGLAND.

1. Look at the relief map on page 34, and you will notice that the most striking feature of the north of England is a broad ridge of high land which runs from the Cheviot Hills southward for nearly two hundred miles. This is the Pennine Chain, which may well be called the "backbone of England."

2. Though we speak of it as a chain, it is really a broad tableland formed of hills which are joined together by high, bleak moors. Several of these hills rise well above two thousand feet. Cross Fell, the loftiest of them, is two thousand nine hundred feet above sea-level. South of Cross Fell rise other heights, such as Whernside, Ingleborough, and Pennigant.

3. The Pennine Chain, though not very lofty, and quite easy to cross on foot, is, and has always been, a barrier between the peoples of the north-east and of the north-west. Yorkshire is very different, both in its industries and in the character of its inhabitants, from Lancashire. In old days the range was covered with thick woods, in which wolves and other wild animals roved. To-day the woods have gone, and the range is almost deserted, except for the sheep which feed on the mountain grass.

4. The soil is too thin and the climate too cold and wet for tillage. Yet the hills and moors have a remarkable beauty of their own. In autumn, especially, they are glorious with the brown, yellow, and purple of bracken and heather.

5. The Pennine Chain is the great watershed of the

north of England. Where the ridge is lowest and the valleys of the rivers on each side are not far apart canals and railways have been made across it. For example, the canal and railway which join Liverpool and Manchester with Huddersfield cross the chain by means of a three-mile tunnel at a height of more than six hundred and fifty feet.

6. The greater part of the Pennines, and indeed of North England, consists of what is called mountain limestone. It is a beautiful bluish-gray rock, almost wholly composed of shells and corals. From this we know that it was formed ages ago at the bottom of the sea.

7. Yorkshire, by far the largest of the English counties, is watered mainly by streams which run east from the Pennines. These unite to form the Yorkshire Ouse, which flows into the Humber. Taking these streams from north to south, we have first the Swale, on which stands the old town of Richmond. Then we reach the Ure, which runs through Wensleydale as a mountain torrent, and near Aysgarth descends some eighty feet by three leaps.

8. Further south flows the Nidd, past Knaresborough and Ribston, which gives its name to the apple called the Ribston pippin. On the Nidd also lies the battlefield of Marston Moor, where Cromwell's Ironsides first overcame the Cavaliers.

9. The next river is the Wharfe, which flows from the high hills through some of the most beautiful scenery in the country. Many of our greatest painters, such as Turner, have chosen scenes in Wharfedale for their pictures. With the more southernly rivers we leave the beautiful scenery



and enter a busy region of towns and smoke. The Aire, on which stands Leeds, and the Calder, with Halifax and Dewsbury on its banks, pass through one of the richest industrial regions of England.

10. The eastern slopes of the Pennines are famous for their old abbeys. Monks settled on the Ure as early as 660. On its banks, not far from the cathedral city of Ripon, are the ruins of Fountains Abbey, perhaps the most



THE RIVERS OF YORKSHIRE.

beautiful of all the ruined abbeys of England. High up in Wharfedale stands Bolton Abbey, the nave of which to-day forms the parish church. Lower down in the same valley is Selby, which, up to a few years ago, had the most perfect abbey in England. Unfortunately it was burnt down, but has since been restored.

11. Towards the middle, and in the south part of the Pennine Chain, we find that the hills are formed not of mountain limestone, but of another kind of rock, called

millstone grit. It is so named because millstones are made out of the coarse sandstones found in the beds.

12. You know that the Pennine Chain comes to an end in what is called the Peak district of Derbyshire. The name is not a good one, for the hills of Derbyshire are rounded, and do not form peaks at all. They are chiefly high tablelands, which appear as hills, because they are cut off from each other by deep river valleys.

13. Some parts of the Peak district are formed of limestone and some of millstone grit, and this gives great variety to the scenery. When you are in the valleys you can easily tell whether the rocks around you are limestone or millstone grit.

14. Water dissolves limestone easily, so we find that in the limestone districts rivers eat out for themselves narrow glens. These glens are shut in by high cliffs covered with beautiful foliage. If, on the other hand, the valleys are broad and flat and rise gradually to ridges of brown rock, you may be sure you are amongst the millstone grit.

15. In the limestone district the rocks are honeycombed by water, which sometimes eats out deep caverns underground. Often the streams disappear in these caverns and continue their journey out of sight.

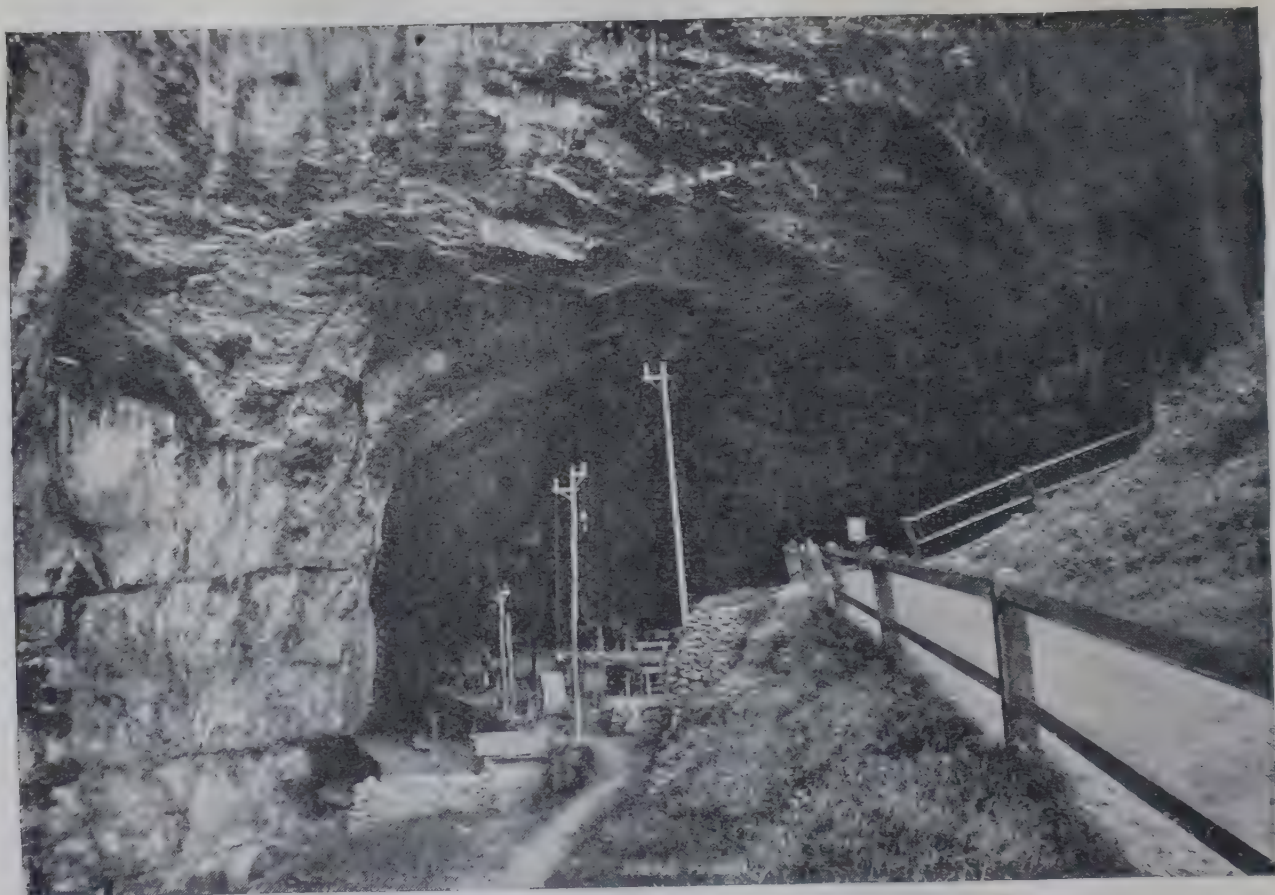
16. Every visitor to the Peak district goes to see one or other of these caverns. There is a famous cavern close to the village of Castleton. You approach it through a long limestone archway, where you see men making ropes. At the end of the archway there is a small door which admits you to the cave.

17. Your guide lights a candle and leads you along a low,



narrow passage. Then you enter a small chamber, and, threading another passage, come to a great hall more than two hundred feet square and over one hundred feet high.

18. On you go to other chambers. One of them, known



ENTRANCE TO THE PEAK CAVERN.

as the chancel, has glistening fingers of lime on the walls. Another has a number of beautiful arches, and a third is shaped like a bell. This is called the Victoria Hall, because Queen Victoria once visited it.



## 25. THE ANCIENT CITIES.—I.

1. We have now visited the chief regions of England and Wales. We have also seen something of the “Heart of the Empire.” It is now time to turn our attention to the very old towns which are scattered up and down the country.

2. An English poet says that “God made the country, but man made the town.” Towns, you must remember, do not grow up anywhere like mushrooms in a field. There is always a good reason why they should be where they are.

3. In our own days new towns are built wherever there is any special work to be done or any special advantage to be gained. Suppose, for example, a district is found to be rich in coal or iron. As soon as the pits are opened men flock to the district. Near the new pits a cluster of cottages is built for the workmen to live in. Out of this cluster of cottages a village or a town may arise.

4. In olden days no town could arise in a district that did not grow enough food for its people and had not a sufficient supply of water for their needs. In our days this is a small matter. By means of railways food can be brought readily and cheaply from a distance, and by means of iron pipes water can be carried long distances from river or lake.

5. Every early settlement had to be made within easy reach of a stream. A large number of our cities and towns are on or near rivers. Some are near the mouths of rivers; others are at the junction of two or more rivers, or at places where rivers may be easily crossed. The names of twelve large English towns end in the word *mouth*, and those of twenty-five towns end in the word *ford*.



6. You know that rivers wear away the stones in their beds until they become gravel. Where two rivers meet there are often large sheets of gravel which have been brought down by the streams in the course of ages. This gravel makes a good site for a town. It is dry and healthy ; there is plenty of water in the neighbourhood, and the position is defended on all sides but one, by the rivers.

7. The Romans, who conquered our land and occupied it for nearly four hundred years, made excellent roads in all directions through the country. These roads were not meant to help trade, but to enable soldiers to march quickly from one point to another. The Roman roads were the means by which the Roman soldiers kept the Britons in bondage.

8. At various places on these roads the Romans made camps or strongholds. Sometimes a new site was chosen ; sometimes the Roman camp was built on the site of an old British fortress. Round about these camps, in the course of time, towns grew up.

9. The Latin word for a camp is *castra*, and this we find in English place-names as *caster* or *chester*. In the south of England, where the Romans first landed, we find Rochester, Chichester, and Winchester.

10. Rochester stood on the Roman road from Dover to London, and guarded the ford of the Medway. It still possesses many Roman remains, as well as a Norman castle, and a cathedral which has a history of eight hundred years. It is now famous for its engineering and cement works, which are chiefly carried on at the suburb of Strood, on the other side of the river.

11. A Roman camp was usually crossed by two broad roads which cut each other at right angles. In most English towns which were formerly Roman camps we can still trace these roads. Sometimes the old fortified gateways of the camp remain. Where they have disappeared, the streets leading to them are called Northgate, Southgate, Eastgate, and Westgate.

12. The Sussex city of Chichester, which was formerly a seaport, shows clearly that it was once a Roman camp. Its chief streets cut each other at right angles, and are named after the four cardinal points. The walls still remain, and follow the outline of the camp.

13. Follow the coast from Chichester westwards, and you soon reach Southampton Water, a long narrow inlet behind the Isle of Wight. This inlet is a natural waterway into the land. The rivers Itchen and Test, which have eaten out a gap for themselves in the chalk downs, flow into it.

14. The Romans had a port at the head of Southampton Water, and about ten miles up the river they formed a camp, now known as Winchester, on the site of an old British stronghold. Winchester soon became a very important place. It protected the port, and stood on the line of march to London.

15. Winchester has still many traces of its Roman origin. When the Saxons conquered this part of the country, they made it the capital of the kingdom of Wessex. This kingdom became the most powerful in England, and its king, Egbert, was the first overlord of the whole country. For several centuries Winchester was the capital of England.



## 26. THE ANCIENT CITIES.—II.

1. On the river Severn stands Gloucester, which is famous for its cathedral, and, like London, is one of the oldest cities in the land. Gloucester, too, has the marks of a Roman camp. Standing at its Cross you see the main thoroughfares running north, south, east, and west.

2. Gloucester is on the border of Wales, in such a position that it can be reached both by sea and by land. The Romans founded Gloucester because they needed a camp in this part of the country to keep in check the fierce Britons of South Wales.

3. Higher up the river is Worcester, another county and cathedral town, which has grown up on the site of a Roman camp. It, too, was a station for carrying warfare into Wales, though it was never so important as Gloucester.

4. Chester on the Dee is by far the most interesting and perfect of all the Roman cities in England. Probably the Romans first made a camp at Chester as far back as 60 A.D. At this time the Welsh inhabited not only Wales and Cornwall, but the whole district between Wales and the Clyde in Scotland.

5. By building a fortified camp at Chester, the Romans were able to thrust a wedge between the Britons of the north and the Britons of the west, and thus prevent them from joining their forces.

6. Chester still retains its ancient sandstone walls, which completely encircle the old city. Here and there we may see parts of the walls exactly as the Romans built them. At one place there are words cut into the stone, telling us



THE OLD CITY OF CHESTER.

1. The Rows. 2. Old timbered houses. 3. The Walls and the river Dee.

that Chester was the camp of the Twentieth Legion, which consisted of the bravest men in the Roman army.

7. Chester, in common with all the towns mentioned in this lesson, has a fine cathedral. The streets are full of old timbered houses, the upper stories of which jut out and



form "rows"—that is, covered galleries, under which there are shops and roadways.

8. Chester was once the chief port for Ireland, but now only small ships can sail up the Dee to the city. It is the chief market for the farming produce of the rich meadow country around it.

9. One other Roman camp which is now a busy town must be briefly mentioned. If you draw a line from York to Winchester it will pass through the town of Leicester, which stands between the Trent and the Warwickshire Avon.

10. Leicester is now filled with factories, in which more than twenty-seven thousand persons make hosiery, boots, and shoes. In Roman times it was filled with soldiers, who kept the peace in the middle of England, and were ready at any moment to march along the great Roman roads to put down risings of the Britons.

11. Some of the towns which the Romans built were known as colonies—that is, settlements of old soldiers. When their time with the army came to an end these men settled down in Britain. The Latin word for a colony is *colonia*, and this we find in English place-names as *coln* or *col*.

12. Colchester, the name of the county town of Essex, means both colony and camp. The river Colne on which it stands was so called because it flowed past the colony. The Romans founded a camp at Colchester to protect the ships which carried the wheat of Essex to the Continent. Colchester is still an important wheat market.

13. The Romans erected many fine buildings in Colchester, including a circus. The town still retains its Roman walls, which are about two miles round. Some parts of

them are seven or eight feet wide, and are so well built that they are firm and strong after the lapse of fifteen hundred years. A good deal of pottery was made at Colchester in Roman times, and many oysters were sent to the Continent from the beds which still exist on the coast.

14. Another Roman colony was founded at Lincoln, the county town of Lincolnshire. The name Lincoln is made up of three words, two of them British and the third Latin. Lin-dum-coln was the old name, and it means "the colony at the fortified place on the pool." Its name shows that it was a British fort long before the Romans made it a colony.

15. Lincoln stands on the river Witham, which in the course of ages has carved a valley for itself through the chalk hills. This gap is an important gateway to the Fens and the sea-coast. The Romans built the city by the side of the river, so as to keep watch and ward over the gap.

16. Lincoln boasts a castle built by the Conqueror, and several fine old houses. Its cathedral crowns the green plateau on which it stands, and commands a wide view over the valley of the Trent. Tanning, ropemaking, brewing, corn-milling, and the manufacture of farming tools are the chief industries of the city.

17. Certain other Roman towns in England have special names which give us no clue as to their Roman origin. One of these is St. Albans, which stands twenty miles north-west of London. It was the forest stronghold of Cassivelaunus, the famous British chief. When the Romans captured it, they built their first town in Britain on the same site. Its modern name was given to it in honour of St. Alban, the first British martyr.





The City of Newcastle-on-Tyne.

From the picture by Niels M. Lund. By permission of Messrs. Macdon, Swan, and Morgan.)

**27. THE ANCIENT CITIES.—III.**

1. The most westerly town which the Romans founded in England is Exeter, the county town of Devonshire. The former part of the name is British, and means “water;” the latter part is Latin, and, as you will notice, consists of the last three letters in the word *caster* or *chester*. Exeter therefore means “the camp by the water.”

2. Exeter is a city set on a hill near the point where the river Exe broadens out to its estuary. On this hill the Britons built a fort, and when the Romans became masters of the land they formed a camp on the same site.

3. Exeter was the chief Roman station for holding down the wild Britons of the west. Then, as now, Cornwall was famous for its tin, which in ancient times was very valuable for making bronze. The Romans forced the Britons of Cornwall to work in the tin mines, and the soldiers at Exeter kept peace in the land. Parts of the old Roman walls still remain to remind us of our first conquerors.

4. Exeter was also the chief city of the west in later times, and the ruined castle on the hill recalls our later conquerors the Normans. The beautiful cathedral was begun nearly eight hundred years ago.

5. Exeter was a famous seaport in the days before big ships, and was a rich and busy place in the time of Queen Elizabeth. It has now very little shipping trade, and but few industries.

6. Another Roman city of the west is Bath, on the Bristol Avon. The Britons discovered that its hot salt springs were good for curing certain skin diseases. In later



times the Romans made a settlement at Bath, in order that they might "drink the waters." The very bath which the Romans built is still in use.

7. Now let us journey to Yorkshire, and see something of the Roman city which is its capital. The city of York stands just below the junction of the Nidd and the Ouse, on a river navigable for small ships to the sea.

8. The Britons had a town on the site long before the coming of the Romans. When those great warriors appeared, their generals saw at once that York was the best possible place for the Roman headquarters in the north.

9. York could be reached both by land and by sea ; it stood in a very fertile valley ; and it was so placed that it blocked the path of an invader from the north. The raiding armies of Scotland had to march down the valley of the Ouse in order to attack the middle and south of Britain.

10. While the Romans were masters of Britain, York was an even more important city than London. Strong walls were built round it, and watch-towers and fortified gates were erected. The walls of York, on which you may still walk, stand on the site of the old Roman walls. The towers and "bars," or gateways, still show traces of Roman work.

11. The glory of York is its splendid Minster. A little wooden church was built on its site as far back as 627 A.D., and in it Edwin, King of Northumbria, was baptized. The present building was begun in 1171.

12. York is now a busy railway junction, and has a large corn-market, besides glass, confectionery, leather, and other industries. Its chief interest, however, lies in the ancient

buildings and noble ruins which tell us such a large part of England's story.

13. The Bishop of York is Archbishop, or chief bishop, of all North England. The English Church has another archbishop, who is superior even to the Archbishop of York. He is known as the Archbishop of Canterbury, and he is chief of all the bishops in South England as well as head of the English Church.

14. Canterbury stands in an open, breezy valley beside the river Stour, and is the county town of Kent. It was formerly a Roman station on the road from Dover to London. Because the King of Kent was the first English king to become a Christian, Canterbury has always been the centre of religion in England.

15. The magnificent cathedral contains the tombs of many men who have played a large part in our history. Canterbury itself is a market-town, and contains important cavalry barracks.

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## 28. GATEWAYS OF TRADE.—I.

1. We are now about to make a coasting voyage round the shores of South Britain, in order that we may see the ports through which our great foreign trade ebbs and flows. We start from the old Border town of Berwick-on-Tweed.

2. We sail along the rocky shores of Northumberland, and soon sight Holy Island, or Lindisfarne, which was the abode of St. Aidan, the first Christian missionary sent to



the people of Northumbria. Farther to the south we see the grand old castle of Bamburgh, which stands on a high wave-washed cliff, and has a history which goes back to the days when the English began to settle in Britain.

3. Off Bamburgh are the Farne Islands, which remind us of Grace Darling's heroic deed. After passing these islands and the rising seaport of Blyth, there is little to attract our attention until we reach the mouth of the Tyne. There we watch the "colliers" steaming in for their cargoes of "black diamonds."

4. The Tyne rises in the Pennine Chain, and is the chief river of Northumberland. Along its banks is a crowded and busy district, where much coal is mined. The winning and export of this coal is the chief business of the towns of "Tyneside."

5. The chief town on the Tyne is Newcastle, which stands on the left bank some ten miles from the sea. At Newcastle the river is spanned by several bridges. The High Level Bridge carries the railway, and a swing bridge crosses the stream at a point where there was a Roman bridge hundreds of years ago. Near the Newcastle end of the High Level Bridge stands the great tower of the *New Castle*. It was new eight hundred years ago.

6. Newcastle is one of the most important manufacturing towns and seaports of the kingdom. The shipping of coal has gone on since the thirteenth century, and it is still the greatest industry of the city. There are large shipbuilding yards in which battleships and merchant vessels of all kinds are constructed. The Elswick works, where big guns for the Royal Navy are made, cover more than seventy-two acres.

7. All along the river bank we see the "staithes" at which the "colliers" receive their cargoes of coal. Sometimes some fifty of these colliers leave the Tyne for London and other ports by the same tide. More than six million tons of coal are exported from Tyneside every year.

8. Opposite to Newcastle is Gateshead, which is also a busy manufacturing town. Farther down the river on the same bank is Jarrow, with large chemical works and iron-shipbuilding yards. At the mouth of the river, on opposite sides, are the coal-ports of North Shields and South Shields; and on the coast, not far from the former town, is Tynemouth. In the summer the hard, firm sands at Whitley Bay, a few miles north of Tynemouth, are crowded with holiday-makers.

9. Continuing our voyage, we sail along the coast of Durham, and are soon in sight of Sunderland, which stands at the mouth of the river Wear. Sunderland is Newcastle on a small scale; its people are chiefly employed in iron and steel manufactures and in iron-shipbuilding.

10. Higher up the river Wear is the old city of Durham, standing in the midst of a rich coal-field. Durham Castle and Cathedral occupy a steep, rocky plateau high above the river, which almost surrounds it. Nowhere in England can we see a more striking scene.

11. The cathedral was begun in the year 1093, and was formerly "half church of God, half castle 'gainst the Scot." The University of Durham now occupies the castle. The town, which clusters on the slopes and at the foot of the plateau, has manufactures of mustard, carpets, and iron.

12. Sailing on from Sunderland, we sight the estuary of the Tees, the river which divides the county of Durham



from Yorkshire. On the north side of the estuary are two towns known as the Hartlepoons. West Hartlepool is the port, and has a large shipping trade in timber from the countries on the shores of the Baltic Sea. The industries of the place are iron manufactures and shipbuilding, much the same as those of Sunderland.

13. On the Yorkshire side of the Tees mouth stands Middlesborough, famous for its "pigs." These are not four-footed animals, but blocks of iron fresh from the blast furnaces.

14. The Cleveland district, of which Middlesborough is the chief town, is very rich in an ironstone which is quarried rather than mined. As coal is also abundant, Middlesborough has naturally become an iron-smelting town. Its growth has been very rapid.

15. Higher up the river, on the Durham side, is Stockton, a river port with manufactures of machinery, ships, pottery, and bricks. Eleven miles to the west is Darlington, one of the chief centres of the North-Eastern Railway.

16. In 1825 George Stephenson constructed between Stockton and Darlington the first railway in all England on which steam power was used. In the station at Darlington you may still see the first engine which Stephenson made for this line.

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## 29. GATEWAYS OF TRADE.—II.

1. We now sail along the cliff-lined coast of Yorkshire, and nowhere do we see a gateway of trade. We sight pretty holiday towns, each with its stretch of firm

sand, but there is no large seaport until we reach the Humber.

2. Whitby, with its ancient abbey standing high on the cliff, and the beautiful town of Scarborough, with its noble headland and ruined castle, attract our attention as we sail by. Soon we are off Flamborough Head, so called because the Danes placed a beacon on it. The waves of the North Sea break against its cliffs in white sheets of foam.

3. Sheltered by Flamborough Head, and lying to the south of it, is Bridlington, a popular seaside resort. There are only two ports between Berwick and the Thames that can be entered safely when the fierce gales of the North Sea are blowing. Bridlington is one of these ports, and Harwich is the other.

4. We now approach the Humber, and notice many steamships steering

towards it or away from it. The Humber seems to be the natural gateway for trade with countries on the other side of the North Sea. Ships are always passing to and fro between the Humber and the ports on the Baltic Sea.

5. Look at the map, and notice the shape of the Humber. Its northern shore curves round like a sickle, and ends in the long, low sand-spit of Spurn Head. From Spurn Head to the opposite shore of the Humber is a distance of about five miles.

6. Entering the Humber, we see on our left the town of



HUMBER PORTS.



Great Grimsby, the largest fishing-port in the kingdom. It has thousands of trawlers and smacks, and every year cod, herring, and whelk to the value of several million pounds are brought to its quays. "Fish trains" on the railways rapidly carry this fresh and cheap food to all parts of the country.

7. Higher up the estuary, on the north shore, stands Kingston-upon-Hull, usually known as Hull. Next to London, it is our chief seaport on the North Sea. It is the third among the ports of the British Isles. A glance at the map shows you that Hull is the most likely place from which to export the woollen goods and the iron and steel goods manufactured in the south-west of Yorkshire. From the northern countries of Europe it imports much flax, timber, tallow, and grain.

8. Now we steam ahead once more, and steer south-east so as to avoid the great bay known as the Wash. We do not sight land again until we see the cliffs and the pretty watering-place of Cromer on the Norfolk coast. Soon we fall in with steamers hurrying towards Yarmouth. They are laden with fish which they have collected from the fishing-boats swarming upon the Dogger Bank, ninety miles east of the Yorkshire coast.

9. Great Yarmouth is built on a sandy spit between the mouth of the river Yare and the sea. Fishing vessels are moored at the river-side by the hundred, and deep-sea fishermen in high boots and sou'-westers walk the streets. In summer the broad sands are crowded with holiday-makers.

10. We continue our voyage, and steam past the cheer-

ful watering-place of Lowestoft, the most easterly town in England. If we were to go ashore, we should notice that all along this coast the sea is making great inroads on the land. It is said that the sea eats away nearly a square mile of land every year on the east coast of England.

11. Now we find ourselves approaching Harwich Harbour, which is formed by the mouths of the two rivers Stour and Orwell. Passenger steamers sail daily from Harwich to Antwerp in Belgium, and to the Hook of Holland.

12. Ipswich, at the head of the Orwell estuary, is the county town of Suffolk. It is an interesting old place, with many churches, most of which are built of flints found in the chalk. Ipswich has a good coasting trade, and manufactures farming tools, railway plant, and manures.

13. Sailing onward, we reach the mouth of the Thames. On the Essex shore we see Southend, and notice its long pier. Southend is the seaside resort nearest to London. A few years ago it was a little fishing village; now it is a large town, in which many Londoners reside.

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### 30. GATEWAYS OF TRADE.—III.

1. We have already visited the port of London, by far the greatest gateway of trade in the whole world. We shall not now enter the Thames, but continue our voyage along the coast as far as Land's End.



2. There is only one small coal-field in the southern part of England. For this reason there are no great manufacturing industries, and therefore no great gateways of trade, on the south coast. Most of the seaports are stations for our warships, or points of departure for passenger steamers.

3. We are now coasting along the shores of Kent. On our right we catch a glimpse of Margate, Ramsgate, and Deal, seaside towns much frequented by Londoners in summer. We sail through the "Downs" with the dangerous Goodwin Sands on our left hand, and after passing South Foreland come in view of the "white cliffs of Dover."

4. We are now sailing through the Strait of Dover. Dover, as you know, was a Roman port. It is the nearest English town to Calais, which lies twenty-two miles away. A cable under the sea and a daily service of steam packets connect Dover with the Continent. A great national harbour, both for men-of-war and for merchant ships, has now been built at Dover.

5. As we sail on we sight the packet station of Folkestone, pass the headland of Dungeness, and shift our course to the westward. Soon we pass a number of pretty seaside towns, the largest of which is Brighton. It stands beyond Beachy Head, and is a very favourite resort. Now we reach Selsey Bill, and steer for the great naval station of Portsmouth.

6. On our left is the Isle of Wight. Its old name meant "cut off," and when we examine the coast-line we see very clearly that once upon a time it was joined to the mainland. It possesses fine breezy downs and a very mild

climate. Many invalids spend the winter at Ventnor and other places on its coast.

7. We are now sailing up Spithead, which lies between the mainland and the island. The waterway is very busy, and we constantly see great battleships, stately liners, and beautiful yachts.

8. Portsmouth is now sighted. It may be called the watch-dog of London on the south coast. It is very strongly fortified, and has huge dockyards and great stores of war material. The fortunes of Portsmouth for hundreds of years have been bound up with the Royal Navy. In the harbour you may still see Nelson's old flagship the *Victory*.

9. Sailing up Southampton Water we reach the important seaport at the head of it. It has the great advantage of four tides every day instead of the usual two. Regular lines of steamers run from Southampton to the Mediterranean, India, the Far East, the Cape, Australia, North America, the West Indies, and South America. Southampton is now the most important packet station in the British Isles.

10. Leaving Southampton Water and sailing westward we pass through the Solent. As we leave the strait we see, on the Isle of Wight side, a strange group of white chalk rocks known as the Needles. They are the remains of a chalk cliff which has been worn through by the ceaseless beating of the waves.

11. We now proceed westward, and sail across the bay which lies between the Isle of Wight and what is known as the Isle of Purbeck. This isle, which is really a peninsula, is famous for its quarries of limestone. After



passing St. Albans Head we steer straight for the Isle of Portland.

12. This, too, is not an island but a peninsula, joined to the mainland by a pebble beach eight miles long. This beach is known as Chesil Bank, and is one of the strangest sights on the coast of England. The pebbles of which it is composed become smaller and smaller as we proceed from the isle to the mainland. It is said that fishermen landing on the beach during a fog or at night can easily discover their whereabouts by noticing the size of the pebbles.

13. The so-called isle of Portland is one solid mass of limestone which has been quarried for ages. The stone of St. Paul's Cathedral and of other London buildings came from Portland. Most of the workers in the quarries are convicts. Thirty years ago they built a huge breakwater, and thus turned Portland Roads, to the north of the isle, into a harbour of refuge. North of this harbour is Weymouth, a beautiful packet station from which steamers sail to the Channel Islands.

14. These islands lie off the coast of France, some ninety miles from Weymouth. They were part of the dukedom of William of Normandy, who, as you know, became King of England in the year 1066. Ever since that time the Channel Islands have belonged to us.

15. Jersey, the largest of the islands, is twelve miles long. Guernsey comes next in order of size, and then follow Alderney, Sark, and Herm. In addition, there are many tiny islets; but the whole of the Channel Islands taken together are less in area than Rutland, the smallest

English county. The sea round the islands is beset with sharp, jagged rocks, and shipwrecks are common.

16. The climate is so mild, the amount of sunshine is so great, and the soil is so fertile, that the Channel Islands have largely become market gardens. Large quantities of early potatoes, tomatoes, grapes, and other fruits and vegetables are grown and are exported to England. Each of the larger islands has its own breed of small, neatly-shaped cows, which are splendid milkers.

17. The chief town of the islands is St. Helier, the capital of Jersey. In summer it is full of visitors, who enjoy the fine coast scenery, the excellent bathing, and the lovely drives which the island affords. The people speak a kind of French, and they govern themselves by means of small parliaments known as "States."

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### 31. GATEWAYS OF TRADE.—IV.

1. We now steer for Start Point, passing on our way Torquay, which has been called the prettiest town in the prettiest county in England. We also pass the mouth of the lovely little river Dart. Rounding Start Point we reach Plymouth Sound, one of the most famous roadsteads in the world. A great sea-wall, nearly a mile long, shelters the inner part of the sound from every wind that blows.

2. Plymouth, with its sister towns of Stonehouse and Devonport, stands on a tongue of land between the mouths of the Plym and the Tamar. It is strongly fortified, and



has a great government dockyard, in which some twelve thousand persons are engaged in building and repairing battleships. Plymouth is also a port of call for numerous ocean steamers carrying mails. On its Hoe is a statue in memory of the defeat of the Armada, and another to that most famous of "sea-dogs," Francis Drake. The old Eddystone Lighthouse, which braved wind and wave for more than a century, also stands on the Hoe.

3. Plymouth is full of interest; but we must not delay. As we steer westward once more, we see the Eddystone Lighthouse lifting its warning beacon high above the waves. We do not pause at the port and watering-place of Falmouth, but round Lizard Point, and make for Land's End. As we forge ahead we pass Mount's Bay, on which stands the fishing town of Penzance.

4. In Mount's Bay, and joined to the shore at low water, is the rocky islet of St. Michael's Mount. On the summit are a castle and an ancient chapel. Land's End is the most westerly point in England. A mile away is the Longships Lighthouse, about which the waves beat themselves into a white froth of angry foam.

5. Look at the fine picture on page 139. It illustrates the manner in which pilchards are caught. These fish appear off the coasts of Cornwall and Devon between July and September. Pilchards are scarcely eaten anywhere in England outside Cornwall, but large quantities of them are exported to the Catholic countries of Europe.

6. The fish swim in huge shoals, which enter the bays. Old fishermen keep watch on the hills, and when they see the shoals, which look like the shadow of a cloud

on the water, they cry, "He-vah ! he-vah ! he-vah !" to rouse their comrades on the shore.

7. Then out go the boats with long nets like drift-nets. Guided by the signals of the men on the hills, the fishermen completely surround with their nets as much of the shoal as they can. The ends of the nets are fastened together, and the fish are shut in. The circle of net is then slowly towed towards the shore until its foot touches the bottom.

8. If the haul has been a good one, the fishermen are kept busy for several days in taking out the pilchards. A net is shot inside the circular net, and is lifted so as to bring the fish to the surface. They are then dipped out with large baskets, as you see in the picture.

9. We now skirt the western coasts of Cornwall and Devon, past mighty cliffs, bold headlands, sheltered bays, and sandy coves. We cannot pause to look into the quaint little seaports which in Queen Elizabeth's days were busy and important, but have now lost much of their trade. Nor can we spare the time to visit the delightful pleasure towns on this glorious coast.

10. Passing Lundy Island we find ourselves in Bristol Channel, and from the number of ships which we see around us, we know that we are drawing near to some great gateway of trade. "Full steam ahead !" is the order, until we sight the Royal Edward Docks at Avonmouth. A few miles up the Avon stands Bristol, one of the oldest towns in the country, and the most important gateway of trade in the west of England.

11. Bristol Channel opens out towards the New World, and naturally the trade of Bristol is chiefly with America



and the West Indies. The first Englishmen to land on the coast of North America sailed from Bristol, and the first steamship which crossed the Atlantic began its voyage at the same port.

12. Between Bristol and the sea is the deep gorge of the Avon, spanned by the Clifton Suspension Bridge. At high water large ships can sail up to the city. For hundreds of years Bristol has imported vast quantities of tobacco and sugar from America and the West Indies.

13. Across the Severn estuary lies the great coal-field of South Wales, which, of course, has its important gateways of trade. Almost opposite to Avonmouth, on the other side of the estuary, is Newport. It has a splendid position, and large ships can enter and leave it at all states of the tide. Vast quantities of coal are exported, and large iron and steel works have grown up on the outskirts of the town.

14. Cardiff, at the head of an inlet to the south-west of Newport, is a very important seaport. It exports more coal than any other port in the world, and it imports a vast amount of iron ore from Spain.

15. On Swansea Bay stands Swansea, also a coal-exporting place, but more famous as a great metal-smelting centre. Gold, silver, copper, lead, tin, nickel, iron, zinc, and other metals are smelted in huge furnaces. The fumes from the furnaces kill most of the grass and trees in the town, so Swansea cannot be called an attractive place. Near at hand, however, are several pretty seaside resorts and the charming district of the Gower Peninsula.

16. From Worms Head, on the west side of this peninsula, we steam across Carmarthen Bay to Milford Haven, one



**How we caught the Pilchards.**

*(From the picture by C. Napier Hawy, A.R.A., in the Walker Art Gallery, Liverpool.  
By permission of the Corporation of Liverpool.)*



of the finest natural harbours of the world. It runs inland for ten miles, and is sheltered from every stormy wind.

17. On the south side of the haven is the old town of Pembroke, and close to it is a government shipbuilding yard. Steamers from Ireland bring large quantities of dairy produce to the port of Milford, which is almost opposite to Pembroke Dock.

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### 32. GATEWAYS OF TRADE.—V.

1. Leaving Milford Haven, we sail outside a group of rocky islands and enter Cardigan Bay. Just as we reach the bay, we notice a fast passenger steamer sailing out of the port of Fishguard and speeding westward for the Irish coast, which is only fifty-five miles away. This is the shortest sea route from any part of South Britain to Ireland.

2. Now we cross Cardigan Bay, and steer directly for Bardsey Point, in which the Snowdon range comes to an end. We need not "hug the coast," for there are no gateways of trade on the shores of Mid-Wales. I think you know the reason why.

3. Soon after passing Bardsey Point we see looming ahead the large bare island of Anglesey. We find its coasts high and rocky, with huge caverns, which are the abode of countless sea-birds.

4. Off the west coast we sight Holy Island, which is joined to the much larger island of Anglesey by a causeway. Holyhead, on Holy Island, is the port of the London and North-Western Railway, just as Fishguard is the Irish port of the Great Western Railway, and Heysham, on Morecambe Bay,

is the Irish port of the Midland Railway. From Holyhead fast mail steamers cross the Irish Sea several times a day.

5. As soon as we clear the western coast of Anglesey we steer directly for the mouth of the Mersey. Away on the right are several pleasant seaside resorts, but no gateways of trade. Now we are off the broad estuary of the Dee, which is so choked with sandbanks that only small ships can navigate it.

6. We skirt the shores of the peninsula of the Wirral, and soon arrive at the mouth of the Mersey, on which stands Liverpool, the second of our seaports. Our vessel easily steams across the bar, where dredgers are always at work. Perhaps you wonder why the Mersey mouth is not choked up with sand like its neighbour the Dee.

7. Near Eastham, where the Manchester Ship Canal begins, the Mersey broadens out into what looks like a landlocked lake. Nearer the sea it narrows, so that the whole estuary is shaped something like a bottle. When the tide flows, a great mass of water runs through the neck to the wide stretch beyond; as the tide ebbs, this bottled-up water rushes back through the neck and scours away the sand.

8. The Mersey is formed by three streams which rise on the borders of Derbyshire, and almost from its source it is as dirty and grimy as a river could well be. It passes the great manufacturing town of Stockport, and then receives the Irwell, on which stands Manchester. After leaving the busy town of Warrington the river begins to form its estuary.

9. At Runcorn the banks approach to within four hundred yards of each other, after having been more than



twice that width apart. The river is here crossed by two bridges, one of which is a railway bridge, while the other is a transporter bridge—that is, a high bridge from which is suspended a car to carry passengers and goods. The car is moved backwards and forwards by means of an electric motor running on the bridge above.

10. Around Runcorn and the opposite town of Widnes the grass and trees are killed by the fumes from the chemical works. Here the river Weaver from Cheshire enters the river Mersey. In its valley are the largest brine springs and salt mines in England. More than a million tons of salt are exported from this district every year.

11. At Eastham, on the Cheshire side of the river, about eight miles upstream from Liverpool, the Ship Canal to Manchester begins. This is one of the finest engineering works in the world, and cost no less than fifteen millions of pounds. Ocean-going ships sail up to Eastham, where they enter the great locks. In eight minutes the largest ship can pass through, and then it finds itself on a waterway of thirty-five and a half miles, stretching right to Manchester.

12. The canal follows the Cheshire bank of the river to Runcorn, and then runs straight to Latchford, where there are more locks. Beyond these the Mersey and Irwell become part of the canal, which ends at the docks of Salford, a large town adjoining Manchester.

13. Try to think of the vast amount of thought and work which was necessary before this canal was completed. Think of the miles and miles of cutting and embankment, of the many locks and basins which had to be made. Every



BIRD'S-EYE VIEW OF THE MANCHESTER SHIP CANAL.



kind of difficulty had to be faced. For instance, at one place the Bridgewater Canal had to be carried across the Ship Canal by means of a swing bridge. All the other canals of the district are linked up with the Ship Canal, so that it now serves the needs of not less than ten million people.

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### 33. GATEWAYS OF TRADE.—VI.

1. We return again to the mouth of the river. On the Cheshire side is New Brighton, with its sandy shore, its lighthouse, Eiffel Tower, and pier. Along the same shore for several miles is a fine sea-wall. Behind are the green hills of the Wirral peninsula.

2. On the Lancashire shore there are docks for seven



THE MERSEY: ENTRANCE TO PRINCE'S DOCK.

miles. Above the long line of sheds you see the funnels of steamers and the masts of sailing ships. There are no finer docks in the world than those of Liverpool, and no finer ships sail the sea than her Atlantic "liners."

3. A journey along these docks by the electric railway is a great treat to a visitor from the country. Most of the ships are from America, though there is scarcely any

country in the world with which Liverpool does not trade. Grain, timber, tobacco, cotton, and dairy produce form the chief cargoes of ships bound for Liverpool.

4. Why is Liverpool such a great gateway of trade? I think you can answer this question for yourselves. It is the outlet and the inlet for the great cotton-manufacturing district of South Lancashire, as well as for the Weaver valley, which, as you know, produces much salt. Look at the map, and notice how well Liverpool is placed for trade with America, Scotland, and Ireland.

5. Opposite to Liverpool is Birkenhead, which is joined to it by a tunnel under the river and by ferry boats across it. Birkenhead has an important iron-



AT THE LANDING STAGE.

shipbuilding trade, and its docks are very large. The "Great Float," as the chief dock is called, stretches far into the peninsula of Wirral.

6. Now we leave the Mersey, and find the long Lancashire coast stretching before us. It is very low and sandy, and has few good harbours. As we sail along we notice a gay steamer with the "three legs of Man" on her paddle-boxes. She is bound for Douglas, the capital of the Isle of Man, which lies eighty miles to the north-west of Liverpool.



7. The Isle of Man is a beautiful island, with a chain of mountains running through the middle of it. On the slopes of these mountains are some of the loveliest glens in the British Isles. In summer the island is crowded with holiday-makers, especially from Lancashire. The Manx people are chiefly fishermen, farmers, and lodging-house keepers. They enjoy Home Rule, and their parliament is called the "House of Keys."



DOUGLAS, ISLE OF MAN.

8. We now sight Southport, a pleasant seaside town, with lawns and tree-fringed streets, and cross the broad estuary of the Ribble. On this river, but too far inland for us to see it, is the cotton-manufacturing town of Preston.

9. Between the Ribble mouth and Morecambe Bay is a low, flat peninsula, on the shore of which stands Blackpool. We can see its Eiffel Tower as we pass. Every summer thousands of Lancashire mill hands spend their holidays in this town. Farther north on the same penin-

sula is Fleetwood, from which ships sail to the Isle of Man and to Ireland.

10. Morecambe Bay, which now stretches before us, is filled with sandbanks, which are dry at low water. Into this bay runs the river Lune, upon which stands the old Roman station of Lancaster—"the Camp on the Lune." It is the county town of Lancashire, and still retains its ancient castle.

11. Not far away on the coast is Morecambe, another seaside resort; and close to it is Heysham, the Irish port of the Midland Railway Company. Morecambe Bay is shut in on the west by an outlying part of Lancashire called Furness. On the south-western side of Furness stands Barrow, the largest port between Liverpool and Glasgow.

12. Iron ore of a very fine quality is found in the neighbourhood, and this has enabled Barrow to build up a great iron-shipbuilding industry. Many of our warships have been built in the Barrow yards.

13. We now skirt the shores of the beautiful Lake district, which we visited in an early lesson. You will not expect to see any gateways of trade on this coast. There is, however, a small coal-field skirting the sea, and "black diamonds" are exported from Whitehaven, Workington, and Maryport.

14. At the entrance to the shallow and sandy Solway Firth we pass the growing port of Silloth. On the river Eden, which empties itself into the Solway, stands the old Border city of Carlisle. It is an important junction on the West Coast Route to Scotland, and is the county town of Cumberland. Carlisle gives its name to a bishop, and has an interesting cathedral.



### 34. THE WOOLLEN COUNTRY.

1. Yorkshire is, as you know, the largest of the English counties, and for this reason it is divided into three parts, called the North, East, and West Ridings. The word "riding" or *thriding* means "a third part," just as farthing means a fourth part. We are now to visit the southern half of the West Riding, which, as you know, is a busy coal-field.

2. The second largest town of the West Riding, and indeed of Yorkshire, is Leeds, on the Aire. The city has a number of very fine buildings and an important university. If, however, you come from the country, you will be more struck by its large number of mills and works.

3. In the mills of Leeds every kind of cloth is made. When a Yorkshireman speaks of "Leeds goods," he means woollen goods. Leeds has, however, many other industries. The ironworks at Low Moor, for example, are the largest in the county.

4. I think you can easily understand why the West Riding of Yorkshire has become the chosen seat of the woollen industry. In the Middle Ages, England was the great wool-growing country. It was then said that all the world was clothed with English wool. On the Pennines, especially on the Yorkshire side, thousands of sheep were bred. Remember that there is always some reason like this for the origin of a great industry. For example, in parts of middle England there are large manufactures of leather, and the reason is that these places are, or once were, centres of a great cattle-raising district.

5. At first the wool was sent to Flanders to be spun



**Sheep Washing.**

*(From the picture by J. Aumonier, R.I., in the National Gallery of British Art.)*



and woven into cloth. After some time Flemish weavers settled in the West Riding, and taught the Yorkshiremen the art of making woollen goods. For hundreds of years all the wool used was English, and the spinning was done by women in their own homes on spinning-wheels worked by the foot. As trade increased more wool was needed than our sheep could supply, and it had to be imported from foreign countries.

6. The wool now chiefly comes from Australia, New Zealand, and Cape Colony. The great wool market is in Coleman Street, London, and there you may see buyers not only from Yorkshire but from all parts of Europe and America. The wool is sold by auction, and sometimes many thousands of bales are disposed of in a few hours.

7. The old days of hand spinning and weaving have long since passed away, and now all the machinery is driven by steam power. All over this district, from Bradford on the north to Huddersfield on the south, from Wakefield on the east to Todmorden on the west, woollen mills filled with costly machinery may be seen. These mills have many windows, and when they are lighted up in the twilight or in the early mornings of autumn and winter they look like beacons of fire spread over the hills.

8. Most of the wool goes first to the "top-maker," who takes it out of the bales, sorts it, and then scours it until it is snowy white. When it is dried the wool is ready for combing or carding, as the case may be. Wool with long fibres is combed; wool with short fibres has to be carded. If the wool is combed, we get worsted cloth, such as serge; but if it is carded, we get woollen cloth, such as Melton.

9. The combing and carding, the spinning and weaving, are done on really wonderful machines, which I cannot here describe. Some day I hope you will visit a woollen mill, and see with your own eyes how cloth is made.

10. A few miles to the west of Leeds is the sister city of Bradford. The two cities are similar in having many great mills and lofty chimneys giving forth dense clouds of smoke which darken the sky. Bradford is the seat of the worsted trade.



WOOLLEN TOWNS.

11. At Manningham, near Bradford, there is a silk and velvet mill which covers an area of eleven acres, and cost half a million of money to build. At Saltaire, three miles from Bradford, is the great Saltaire Mill, in which between two thousand and three thousand persons are engaged in making alpaca.

12. There are very many busy towns and villages in the valleys of the Aire and Calder, and amongst them is the prosperous town of Halifax, which manufactures carpets and fancy dress goods as well as cotton cloth and hosiery. Crossley's famous carpet mills at Halifax employ nearly **five thousand** people.

13. Huddersfield, a few miles to the south of Halifax, makes fine woollen cloths. In the Spen valley are several **towns which make** what is called "shoddy" out of old cloth torn to shreds and mixed with a little new wool. Dewsbury and Batley, in the Calder valley, are also engaged in this trade.

14. Cloth is also made, but on a much **smaller** scale, in the west of England, at Trowbridge and Bradford in Wilt.

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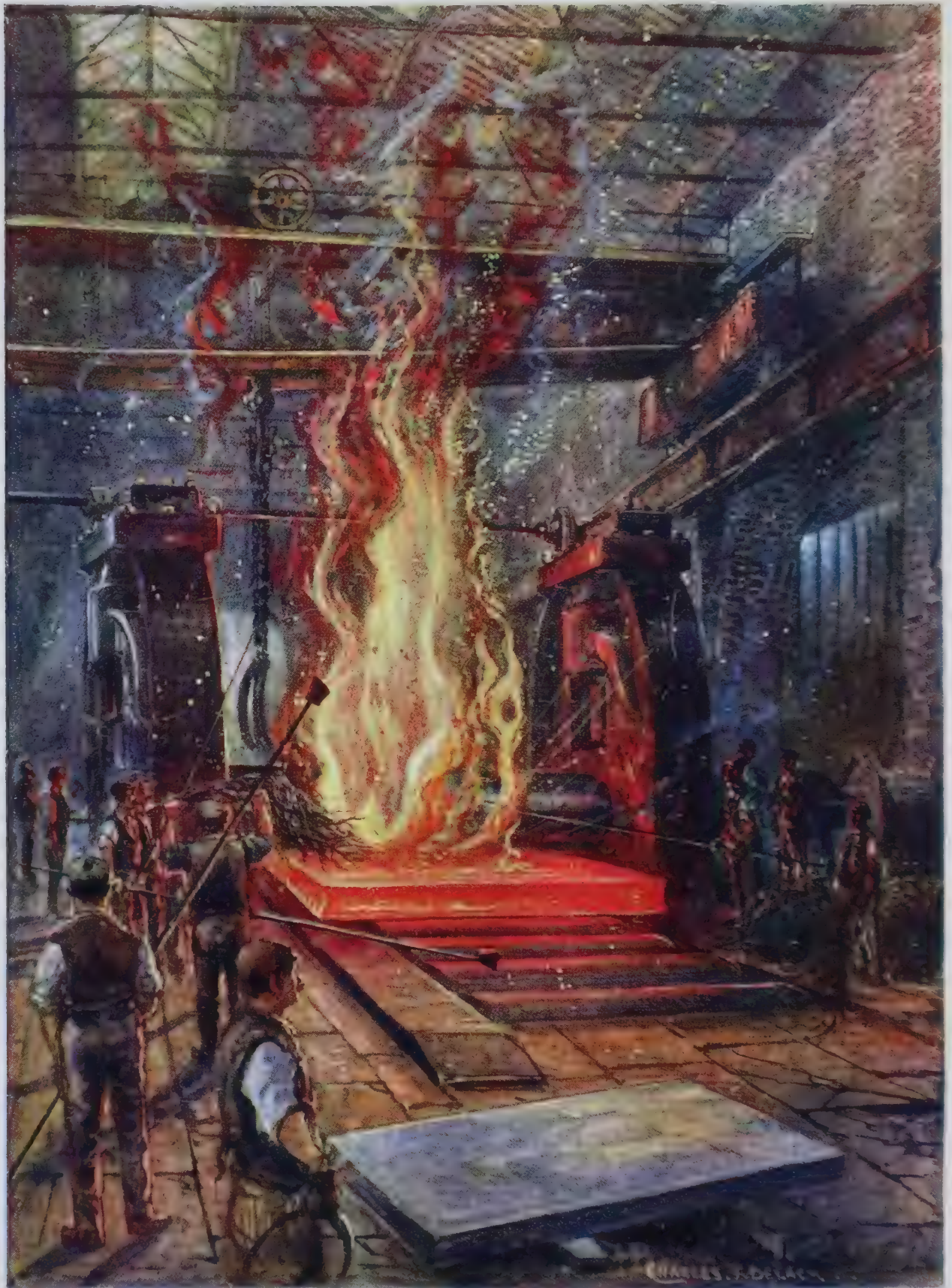
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### Rolling Armour Plates.

*(From the picture by Charles J. de La V.)*

[This picture represents the rolling of an armour plate for one of our battleships. Freshly and by throw on the red-hot plate, and to burning it loosens the scale, which is scraped off by men armed with files.]



shire, Frome in Somersetshire, and Stroud in Gloucestershire. Most of the scarlet cloth used for soldiers' uniforms is made at Stroud.

15. Our woollen and worsted factories produce more than seventy million pounds' worth of cloth and yarn each year, and employ over a quarter of a million persons. About one-third of all the cloth and yarn which they manufacture is sold abroad.

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### 35. THE COTTON COUNTRY.

1. Every man, woman, and child who wears clothes at all, wears one or more garments made of cotton. Thus the manufacture of cotton cloth is one of the leading industries of the world.

2. The cotton country is almost entirely the district drained by the river Mersey and its tributaries. Cotton, as you know, is the white downy substance found in the seed-pods of a certain plant which grows only in hot, damp countries.

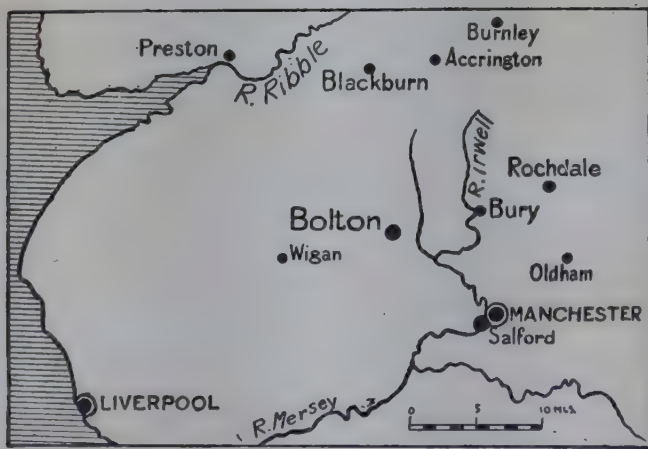
3. The cotton plant is an annual—that is, the seed must be sowed anew every year. From eight days to a fortnight after the sowing it shows itself above the ground. In due course the plant throws out flower stalks, and at the end of each of these stalks a pod appears filled with cotton wool.

4. The raw cotton used in our mills is chiefly grown in the United States, in India, and in Egypt. It is brought from these countries to Liverpool.



5. Most of our raw cotton is therefore sent to us from three countries. But it is very important to have many sources of supply, so that if the crop fails any year in one or two places the industry shall not suffer. That is why efforts are being made to introduce cotton-growing into our colonies in East and West Africa.

6. Though our people of the British Isles use about thirty-three million pounds' worth of cotton cloth every year, we produce three times as much as we need.



COTTON TOWNS.

Two-thirds of all the cotton goods made in Great Britain are sent to Africa, America, and Asia. The Lancashire mill hands are cotton-cloth makers to the whole world.

7. Now, why should South Lancashire be the chosen home of this industry? It has not happened by chance. In order to spin cotton cheaply and well, you must have a moist climate, plenty of good water, and plenty of coal. The south-west winds which blow across this part of the country keep the air moist, so that cotton can easily be spun and woven; the South Lancashire coal-field provides plenty of good and cheap fuel to drive the machines; and the Pennine hills send down many streams.

8. The great and busy city of Manchester, which we have already visited, is the centre of the cotton industry. There are not many factories in Manchester itself, but it is

the great market and centre of the trade. All the spinning and weaving companies of Lancashire have their chief offices in Manchester, and their agents buy and sell on the Manchester Exchange.

9. The towns which spin and weave cotton stand thickly round Manchester. One of the chief of them is Oldham; farther north is Rochdale, which also makes flannels. Bury, Bolton, Wigan, Blackburn, Burnley, and Preston are other important cotton towns. Some of these places have other industries as well. Wigan, for example, is a great centre for coal and iron.

10. Let us visit a cotton mill. You see cotton mills everywhere in South Lancashire. They are grim, bare buildings, four or five stories high. Each mill has its lofty chimney, with a black banner of smoke.

11. Almost everything in a cotton mill is done by machinery. Machines snap the iron bands of the bales, loosen the fibres of the cotton, and remove dust, seeds, husks, and dirt from it. Other machines mix it, beat it, and still further clean it, until it becomes a thick sheet of "cotton wool."

12. It is now ready for the carding machine, which straightens out the fibres and lengthens them until they are formed into a "sliver"—that is, a sort of ribbon about an inch wide and half an inch thick. Other machines now take the "sliver" in hand. They draw it, twist it, wind it, and finally spin it into yarn ready for weaving.

13. Spinning is chiefly done in the mills of the more southern towns, and weaving in towns such as Preston which lie farther to the north. In some of the largest



mills, however, both spinning and weaving are done under the same roof.

14. When the yarn is ready for weaving, it is known as the "cop." The weaving-sheds in which the "cop" is woven into cloth sometimes contain hundreds of looms, which make a terrible noise. The "hands" cannot hear each other speak, but by "lip-reading" they can talk quite easily across the noisiest shed.

15. One Lancashire firm alone has seven thousand looms, and produces no less than thirty thousand *miles* of cotton cloth every year. With this we could put a wrapping round the earth at the equator, and then have enough left to lay down a strip the whole length of Africa. Altogether, there are fifty-six million spindles in Lancashire, and they make about three million miles of cotton cloth every year!

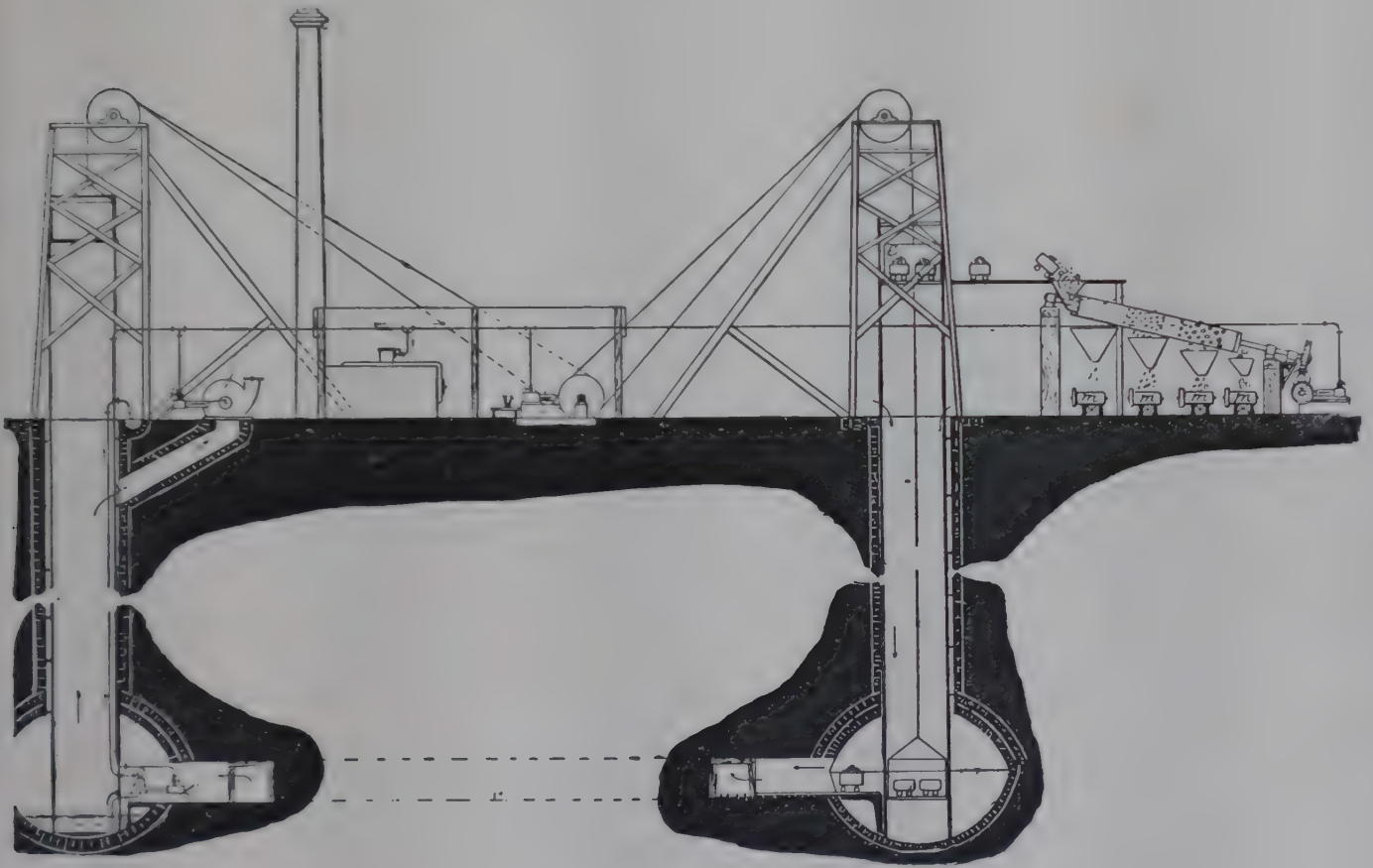
16. If you visit a Lancashire cotton town, you will be interested to see the workers hurrying to the mills in the morning and after dinner. The women wear shawls over their heads to prevent them from taking cold. The inside of the sheds is very hot and steamy, and it is easy to catch a chill on the way to and from their work.

17. Many boys and girls work in the mills as half-timers. Most of the mill hands wear clogs, so that in a Lancashire town you can always hear the "clang of the wooden shoon."

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### 36. THE COAL-MEASURES.

1. Coal is by far the most valuable mineral found in our land. It has been called "black diamonds," but it is far more important to mankind than diamonds. Coal gives us heat, light, and power.



SECTION OF A COAL-MINE.

2. We use coal to heat our houses, to cook our food, to smelt ores, and to soften metals so that they can be worked up into different forms. We also use coal to raise the steam which drives the railway engine, the marine engine, and all the varied machinery of our mines and factories.

3. Gas for lighting houses and streets comes from coal,



and electric light and power are produced by steam engines fed by the same mineral. Without doubt, Britain has become wealthy and great chiefly because of her vast stores of excellent coal.

4. In Book II. I told you something of the way in which coal was formed. You will remember that it is nothing but vegetable matter which has been changed into a hard, shiny substance by pressure and heat.

5. There was a time in the history of our land when a large part of its surface was covered with dense jungles and forests. The land was then very flat and swampy. The climate was warm and moist, and plants of all kinds grew in great abundance.

6. The trees and plants grew so thickly that they formed a dense mass of vegetable matter on the swampy ground. At this time there were no flowers, birds, or any of the higher animals. The forests were not only silent, but gloomy, for most of the plants were dark evergreens and ferns.

7. Slowly the land sank, and shallow water covered the jungle. Rivers brought down their loads of mud and sand, and dropped them in the water to form new beds of rock. As the weight of these beds increased, the vegetable matter underneath gradually turned into coal.

8. At last the shallow sea was silted up, and once more the forests and jungles grew. In time the land sank again, and another layer of mud and sand covered up the trees and plants and turned them into coal. This went on for ages, and every time the land sank a new seam of coal was formed.

9. Coal seams are found of all thicknesses, from an inch up to forty feet. As a rule, colliers do not work a seam under two feet thick. Underneath each seam there is usually a bed of fire clay, in which we can trace the roots of the trees and plants which formed the ancient jungle. This bed of clay was once the surface of the ground.

10. Above each seam of coal we usually find a layer of shale—that is, of mud or clay which has been so much



MAP SHOWING COAL-FIELDS.



MAP SHOWING DENSITY OF POPULATION.

pressed or heated that it has turned into a slaty kind of rock. These beds of shale were once the mud and sand which covered up the old forests.

11. We often speak of a coal-field—that is, a part of the country where coal is largely mined. In England and Wales there are eighteen separate coal-fields. The most important of them are shown on the map above.

12. Below the coal-bearing rocks we find the millstone grit, and below the millstone grit the mountain lime-



stone. Where the millstone grit or the mountain limestone is on the surface, the upper coal-measures have been worn away by rain, frost, and running water.

13. Once upon a time almost the whole of North England was covered with coal-bearing rocks. You know that the higher parts of the land are always worn away more rapidly than the plains. The coal-measures on the higher parts of the Pennines have been gradually planed down by rains and frosts, until the millstone grit and the mountain limestone have been laid bare.

14. Thus the beds of coal that once stretched across North England were divided, and now we see them as separate coal-fields. The Yorkshire coal-field lies along the eastern flank of the Pennines, while the Lancashire coal-field lies along the western flank.

15. Farther north on the eastern flank we find the Northumberland and Durham coal-field. Along the margin of the Irish Sea to the west of Skiddaw we find a fourth coal-field. Some of the pit workings in this district extend far under the sea.

16. The South Wales coal-field produces a coal which gives out great heat with but little smoke and leaves a small amount of ash. You already know that this coal is largely used for steamships, and is sent to all parts of the world.

17. Most of the coal-measures in our country also contain fire clay, sandstone, and ironstone. There are actually some pits where iron is brought up one shaft and coal up another.



### 37. THE IRON AND STEEL COUNTRY.—I.

1. I told you in an early lesson that England first became known to the great nations of olden times because she was rich in metals. The Romans prized the tin of Cornwall and the lead of the Mendip Hills almost as much as we prize the gold of South Africa to-day. The Romans also dug up and smelted iron, which is now by far the most important of all metals.

2. You and I can hardly think of a world without iron. Steam-engines, rails, bridges, ships, cannon, rifles, water-pipes, and a thousand other useful things are made of iron. Without this metal we should be far less powerful and far less comfortable than we are. Our iron and steel industries have played a large part in making us rich and great.

3. Ironstone, or iron ore, is found in large quantities in almost all parts of our land. The chief iron districts are now almost the same as the coal districts, but it was not always so. Up to about one hundred and fifty years ago coal and iron were not worked together.



4. Iron ore contains other substances besides iron, and these must be removed before the iron is fit for use. The iron ore must be melted, and in order to do this great heat is needed. In olden days the fuel which people commonly used was wood. They therefore smelted their iron in forests.

5. In Roman times, and for hundreds of years after, a dense forest covered a large part of Kent and Sussex. This was known as the Weald of Kent. Its soil was a stiff clay in which a good deal of iron ore was found. Because iron ore and wood were found together, the Weald became the chief iron-producing district of England.

6. The Midlands round about Birmingham were also rich in iron and in wood, and so were the districts known as the Forest of Dean and the Forest of Arden. For hundreds of years iron was worked in forest districts. When, however, wood became scarce, and there was no coal to take its place, the industry came to an end.

7. About the year 1718 a man named Darby discovered that coke could be used for smelting iron. This was a great discovery, and it marked the beginning of the iron industry as we know it to-day.

8. Now let us visit an iron district and see how the iron is smelted. On the next page you will see a picture of a row of blast furnaces. You notice that each furnace is a tall round tower. Coke and wood are placed in the lower part of the tower. When this is lighted and is glowing red, ironstone and limestone are tipped in from above. The limestone is used to make the iron melt easily.

9. In order to raise the great heat needed to melt the



BLAST FURNACES.

ironstone, blasts of hot air are forced into the lower part of the furnace by means of an engine. Then more and more ore and limestone are tipped in, until the tower is almost full.

10. Once the furnace is in full swing it is kept going night and day for years together. At the bottom the iron runs out in a molten stream, and fills up a number of trenches in a bed of sand. When the iron cools and becomes solid it is known as pig-iron.

11. You must not suppose that the iron is now pure. It still contains impurities, and these are removed by working it in a furnace and then rolling it. In order to make the various kinds of iron, pig-iron has to be treated



in a number of different ways. One of the most useful forms of iron is steel, which is iron tempered and hardened by being mixed with carbon.

12. The city of Sheffield, in the southern part of the West Riding of Yorkshire, is a great centre of the iron and steel trade. It gets its name from the little river Sheaf, which joins the Don in the middle of the town. These rivers were of great advantage to Sheffield in the old days. They enabled the city to bring the right sort of iron ore from Sweden to its doors, and the rapid streams of the neighbourhood turned its grindstones.

13. Sheffield is famous all the world over for its knives, razors, scissors, saws, and files. As far back as the time of Edward the Third its knives were renowned. Now the city is even more famous for heavy iron work. At the great works of Messrs. Vickers Sons and Maxim, cannon and the huge steel plates which form the armour of our battleships are made. You remember that in our voyage round the coast we saw works of the same kind on the Tyne and at Barrow.

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### 38. THE IRON AND STEEL COUNTRY.—II.

1. Birmingham, the second city of Great Britain, is the chief centre of the English hardware industries. Almost everything that can be made of metal, from a pin to a cannon, is produced in Birmingham.

2. In olden days much iron was worked in the wooded region around the city. When coal took the place of



TOWN HALL, BIRMINGHAM.

wood, the industry still remained, for Birmingham stands near to the great coal-field of South Staffordshire.

3. Birmingham is the chief city of the Midlands. Examine

your map, and you will see that it stands almost in the heart of England. Its public buildings are many and handsome, and it boasts a very fine university. There is no better governed town in the country, and everything is done that can be done to improve its appearance, and make it good and pleasant to dwell in.

4. Though Birmingham is outside that part of South Staffordshire known as the Black Country, it is the chief centre of trade for the whole district. The

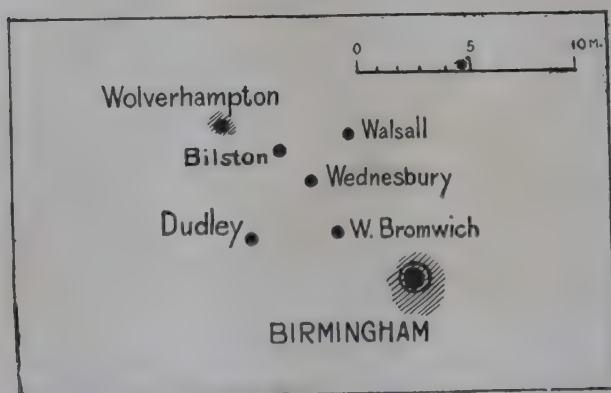


CHAMBERLAIN SQUARE, BIRMINGHAM.



Black Country is fortunate in having not only much ironstone and coal, but also much limestone, which, as you know, is placed in the furnaces to make the ore melt readily. For this reason the Black Country has become one of the busiest and richest parts of the land. It is, indeed, the smithy of England.

5. The towns of the Black Country stand near together, and are joined by a network of railways and canals. All the towns make hardware of one sort or another. The chief towns are Wolverhampton, Walsall, Bilston, Wednesbury, West Bromwich, and Dudley. You will see them all marked on the map. Dudley



THE BLACK COUNTRY.

marked on the map. Dudley has a fine old castle which stands high on a wooded hill, looking out on a dreary but very busy land.

6. Wolverhampton makes pig-iron, and turns it into rails, hoops, sheets, rods, boiler plates, and castings of all sorts.

Large numbers of locks, latches, hinges, bolts, garden tools, axes, vices, anvils, and fire-irons come from Wolverhampton.

7. Walsall makes the metal parts of harness as well as gas-tubes and firearms. Dudley manufactures chains, nails, and flint-glass. Wednesbury makes ironwork of all kinds, and builds railway carriages.

8. If you travel through the Black Country by night, you can easily fancy yourself in a land of fire. Long, forked flames shoot up from the blast furnaces; the ironworks glow with a ruddy light, and here and there the pit mounds are

on fire. The thud of steam-hammers, the roar of furnaces, and the hiss of molten iron are always heard, day and night.

9. About sixteen miles from Birmingham is Coventry, which stands in a little coal-field of its own. It is a very old town, with a history that goes back to Danish times. We visited it, you remember, in our journey through the "Heart of England."

10. Coventry used to make silk ribbons and piece-goods, but now it has become an important hardware town. It has many engineering works, and guns, watches, sewing-machines, bicycles, and motor cars are largely made. Printing and iron-founding are also carried on. Redditch, fifteen miles south of Birmingham, is famous all the world over for making pins, needles, and fish-hooks.

11. You already know that we find another busy iron district in the Black Country of South Wales. The coal-field extends from Pembroke in the west through Carmarthenshire and Glamorganshire. The latter country contains the chief iron district.

12. In Glamorganshire you see the same kind of scenes which you saw in South Staffordshire. The iron ore which is used in the blast furnaces is now chiefly brought from Spain. Cheap coal with which to smelt it is also brought from the same country.

13. A good deal of tin-plate is also made in South Wales. Tin-plate consists of thin sheets of iron or steel coated with tin to prevent them from rusting. Much of this tin-plate is exported to America and Australia, where it is used for making cans in which fruits and meat are preserved.



### 39. OUR RAILWAYS.

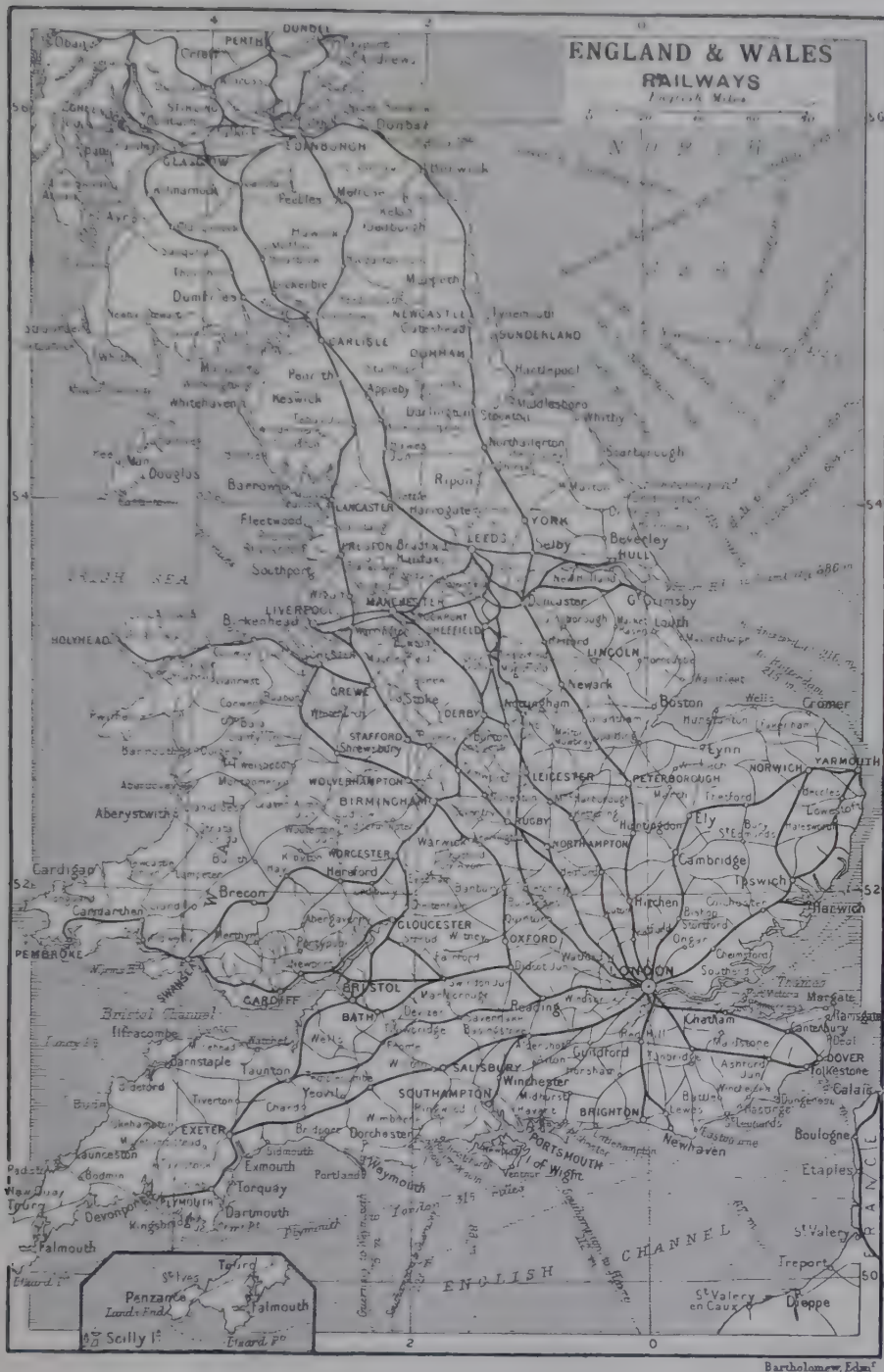
1. At first sight a railway map of England and Wales is sure to bewilder you. The whole country seems covered with a cobweb of lines, and there is no town of any importance without one or more railways running to it. No country is better provided with railways than our own, and nowhere is travelling so rapid and so comfortable.

2. Look at the railway map carefully. The first thing I wish you to notice is that where the country is thickly peopled there you will find many railways. Run your eye over the great industrial districts of England, and you will see a network of railways covering them.

3. Along the broad ridge of the Pennines, in Cumberland, in Wales, and in Cornwall you see far fewer railways than in the industrial districts. These parts of our land are thinly populated, and railways are only built where there are enough people to make them pay.

4. You know that the greater part of England is a plain, and this means that railway-building has not been difficult or costly in the East and the Midlands. Some of the great main lines, however, have to cross hilly country, where tunnels and bridges must be made at great expense. Wherever a railway is really needed in England or Wales it will be made, no matter what obstacles have to be overcome.

5. All these railways have been built since the middle of last century. There are men still living who can remember the time when the only method of getting from place to place was by the stage-coach, or, for poor people, the much slower stage-wagon and canal boat.



6. What an immense change was brought about by railways! A new age set in when all parts of the country were linked together by steel rails. Trade increased by leaps and bounds. Britain was opened up to Britons, and new ideas flew along with the locomotives.



7. Look again at your railway map, and let us see if we can find some order in what seems to be confusion. Fix your eye on London, and notice the number of railways which spread out from it like the spokes of a wheel. With a little attention you can make out two main lines running north to Carlisle, and a third to Berwick.

8. First we will follow the London and North-Western Railway, which begins at Euston Station. You notice that it runs to Rugby, and then on to one of the chief centres of the railway at Crewe, where its engines and carriages are chiefly made. From Crewe it proceeds past Warrington to Preston and Lancaster.

9. In order to reach Carlisle it has to climb over Shap Fell, which links the Pennines with the hills of the Lake district. At the top of Shap Fell the rails are 1,000 feet above sea-level. Then they sink to the Eden valley, and so reach Carlisle.

10. The Midland Railway starts at St. Pancras Station, runs through Bedford and Leicester to Nottingham, and then makes its way along the eastern side of the Pennines to Sheffield and Leeds.

11. To get to the west again it has to cross the Pennines, and this it does by what is called the Aire gap. It then sends off a branch to Barrow and Heysham, and runs to Carlisle by way of the Eden valley.

12. What is called the East Coast Route to Scotland consists of the main lines of the Great Northern and the North-Eastern Railway. This route follows the Great North Road right to Doncaster, then proceeds to York, runs on through Mid-Durham to Newcastle, and arrives at the

Border town of Berwick by skirting the coast within sight of the sea.

13. These railways have many offshoots to all the important centres on either side of the main line. A study of the map will show you the London and North-Western Railway sending off branches at Crewe to Chester, and along the North Wales coast to Holyhead, where fast boats are waiting to carry passengers to Ireland. Another branch runs to Manchester, which is connected with Leeds on the east and Liverpool on the west. A third branch runs south from Crewe to Bristol.

14. The headquarters of the Midland Railway are at Derby, from which we find offshoots to Manchester on the one side and to Sheffield on the other. Another branch runs to Gloucester and Bristol.

15. The Great Northern and North-Eastern Railways tap all the important towns on the Yorkshire and Durham coast, and connect them with Carlisle by means of a railway which runs from Newcastle through the low ground which is known as the Tyne Gap.

16. The Great Central Railway runs from Marylebone Station, London, past Rugby, Leicester, and Nottingham to Sheffield, from which place there are branches to Lincoln and Grimsby on the east, and to Manchester on the west.

17. The eastern counties are served by the Great Eastern Railway, which links London with Ipswich, Cambridge, Ely, King's Lynn, Norwich, and Yarmouth.

18. London is joined to the towns of the west and south-west by the Great Western Railway, which runs past Reading to Swindon, its headquarters, and then on to Bath



and Bristol, where the line divides. One arm enters the Severn Tunnel and runs through South Wales to Milford and Fishguard; the other runs through Exeter and Plymouth to Penzance.

19. The London and South-Western Railway also unites the capital with Exeter, throwing off by the way branches to Southampton and Portsmouth. The main line passes the old cathedral city of Salisbury.

20. By means of the London, Brighton, and South Coast Railway, and the South-Eastern and Chatham Railway, the capital is connected with the towns and ports of Kent and Sussex. We cannot now follow these routes, nor can we deal with the multitude of small railways which serve districts untouched by the main lines and branches of the great companies.

21. Every year more and more railways are being constructed. Some of these are light railways or tram-lines which have been made in country districts, so that farmers may readily send their produce to market. On some of these lines motors take the place of locomotives. In many places electricity is now used instead of steam.

# Poetry for Recitation.

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## I. ENGLAND.

“ I view the ground’s most gentle dimplement  
(As if God’s finger touched but did not press  
In making England !), such an up and down  
Of verdure,—nothing too much up or down,  
A ripple of land ; such little hills, the sky  
Can stoop to tenderly and the wheatfields climb :  
Such nooks of valleys, lined with orchises,  
Fed full of noises by invisible streams ;  
And open pastures, where you scarcely tell  
White daisies from white dew.”

E. B. BROWNING.

---

## 2. HOME THOUGHTS FROM ABROAD.

Oh to be in England  
Now that April’s there,  
And whoever wakes in England  
Sees, some morning, unaware  
That the lowest boughs and the brushwood sheaf  
Round the elm-tree bole are in tiny leaf,  
While the chaffinch sings on the orchard bough  
In England—now !



And after April, when May follows,  
 And the whitethroat builds, and all the swallows !  
 Hark, where my blossomed pear-tree in the hedge  
 Leans to the field and scatters on the clover  
 Blossoms and dewdrops—at the bent spray's edge—  
 That's the wise thrush ; he sings each song twice over,  
 Lest you should think he never could recapture  
 The first fine careless rapture !  
 And though the fields look rough with hoary dew,  
 All will be gay when noontide wakes anew  
 The buttercups, the little children's dower  
 —Far brighter than this gaudy melon-flower !

ROBERT BROWNING.

### 3. THE WILD NORTH-EASTER.

*"'Tis the hard gray weather breeds hard English men."*

Welcome, wild North-Easter !  
 Shame it is to see  
 Odes to every zephyr ;  
 Ne'er a verse to thee.

Welcome, black North-Easter !  
 O'er the German foam ;  
 O'er the Danish moorlands,  
 From thy frozen home.

Tired we are of summer,  
 Tired of gaudy glare,  
 Showers soft and steaming,  
 Hot and breathless air.

Tired of listless dreaming,  
Through the lazy day :  
Jovial wind of winter,  
Turn us out to play !

Sweep the golden reed-beds ;  
Crisp the lazy dyke ;  
Hunger into madness  
Every plunging pike.

Fill the lake with wild-fowl ;  
Fill the marsh with snipe ;  
While on dreary moorlands  
Lonely curlew pipe.

Through the black fir-forest  
Thunder harsh and dry,  
Shattering down the snow-flakes  
Off the curdled sky.

\* \* \* \*

Let the luscious South wind  
Breathe in lovers' sighs,  
While the lazy gallants  
Bask in ladies' eyes.

What does he but soften  
Heart alike and pen ?  
'Tis the hard gray weather  
Breeds hard English men.

What's the soft South-Wester ?  
'Tis the ladies' breeze.



Bringing home their true loves  
Out of all the seas.

But the black North-Easter,  
Through the snowstorm hurled,  
Drives our English hearts of oak  
Seaward round the world.

Come, as came our fathers,  
Heralded by thee,  
Conquering from the eastward,  
Lords by land and sea.

Come ! and strong within us  
Stir the Vikings' blood ;  
Bracing brain and sinew ;  
Blow, thou wind of God !

CHARLES KINGSLEY.

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#### 4. A SUMMER PICTURE.

The earth was green, and the sky was blue :  
I saw and heard one sunny morn  
A skylark hang between the two,  
A singing speck above the corn.

A stage below, in gay accord,  
White butterflies danced on the wing ;  
And still the singing skylark soared,  
And silent sank and soared to sing.

The cornfield stretched a tender green  
To right and left beside the walks ;  
I knew he had a nest unseen  
Somewhere among the million stalks.

And as I paused to hear his song  
While swift the sunny moments slid,  
Perhaps his mate sat listening long,  
And listened longer than I did.

CHRISTINA ROSSETTI.

---

## 5. THE TIDAL RIVER.

Clear and cool, clear and cool,  
By laughing shallow and dreaming pool ;  
Cool and clear, cool and clear,  
By shining shingle and foaming weir ;  
Under the crag where the ouzel sings,  
And the ivied wall where the church-bell rings,  
Undeiled, for the undeiled ;  
Play by me, bathe in me, mother and child.

Dank and foul, dank and foul,  
By the smoky town in its murky cowl ;  
Foul and dank, foul and dank,  
By wharf and sewer and slimy bank ;  
Darker and darker the farther I go,  
Baser and baser the richer I grow ;  
Who dare sport with the sin-deiled ?  
Shrink from me, turn from me, mother and child.



Strong and free, strong and free,  
 The floodgates are open, away to the sea ;  
 Free and strong, free and strong,  
 Cleansing my streams as I hurry along  
 To the golden sands, and the leaping bar,  
 And the taintless tide that awaits me afar,  
 As I lose myself in the infinite main,  
 Like a soul that has sinned and is pardoned again.  
 Undeiled, for the undeiled ;  
 Play by me, bathe in me, mother and child.

CHARLES KINGSLEY.

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## 6. LONDON.

(Early morning on Westminster Bridge.)

Earth has not anything to show more fair ;  
 Dull would he be of soul who could pass by  
 A sight so touching in its majesty ;  
 This city now doth, like a garment, wear  
 The beauty of the morning ; silent, bare,  
 Ships, towers, domes, theatres, and temples lie  
 Open unto the fields, and to the sky ;  
 All bright and glittering in the smokeless air.  
 Never did sun more beautifully steep  
 In his first splendour valley, rock, or hill ;  
 Ne'er saw I, never felt, a calm so deep !  
 The River glideth at his own sweet will ;  
 Dear God ! the very houses seem asleep ;  
 And all that mighty heart is lying still.

WILLIAM WORDSWORTH.

## 7. WINSTANLEY.

[*Winstanley was a London merchant, who built the first Eddystone Lighthouse of wood between the years 1696-1700. The following poem describes the building of the lighthouse, and how it and its builder were swept away in 1703. A second lighthouse was burned down in 1755. A third lighthouse of stone was built by Smeaton in 1757-59, and a fourth took its place in 1882.*]

Winstanley rode to Plymouth town  
All in the sleet and snow,  
And he looked around on shore and sound  
As he stood on Plymouth Hoe.

Till a pillar of spray rose far away,  
And shot up its stately head,  
Reared and fell over, and reared again :  
“ ’Tis the rock ! the rock ! ” he said.

Winstanley chose him men and gear :  
He said, “ My time I waste,”  
For the seas ran seething up the shore,  
And the wrack drave on in haste.

But twenty days he waited and more,  
Pacing the strand alone,  
Or ever he set his manly foot  
On the rock—the Eddystone.

Then he and the sea began their strife,  
And worked with power and might :  
Whatever the man reared up by day  
The sea broke down at night.



Now March was gone, came April in  
And a sea-fog settled down,  
And forth sailed he on a glassy sea,  
He sailed from Plymouth town.

In fair weather with mirth and cheer  
A stately tower uprose ;  
In foul weather, with hunger and cold,  
They were content to close ;

Till up the stair Winstanley went  
To fire the wick afar ;  
And Plymouth in the silent night  
Looked out and saw her star.

Winstanley set his foot ashore :  
Said he, " My work is done ;  
I hold it strong to last as long  
As aught beneath the sun."

Withal Winstanley went his way  
And left the rock renowned,  
And summer and winter his pilot star  
Hung bright o'er Plymouth Sound.

But it fell out, fell out at last  
That he would put to sea,  
To scan once more his lighthouse tower  
On the rock o' destiny.

And the winds woke, and the storm broke,  
And wrecks came plunging in :

None in the town that night lay down  
Or sleep or rest to win.

The great mad waves were rolling graves,  
And each flung up its dead ;  
The seething flow was white below,  
And black the sky o'erhead.

And when the dawn—the dull, gray dawn—  
Broke on the trembling town,  
And men looked south to the harbour mouth,  
The lighthouse tower was down !

Down in the deep where he doth sleep  
Who made it shine afar,  
And then in the night that drowned its light,  
Set, with his pilot star.

Many fair tombs in the glorious glooms  
At Westminster they show ;  
The brave and the great lie there in state :  
Winstanley lieth low.

JEAN INGELow.

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## 8. THE HOMES OF ENGLAND.

The stately homes of England,  
How beautiful they stand,  
Amidst their tall ancestral trees,  
O'er all the pleasant land !



The deer across their greensward bound,  
Through shade and sunny gleam ;  
And the swan glides past them with the sound  
Of some rejoicing stream.

The merry homes of England !  
Around their hearths by night,  
What gladsome looks of household love  
Meet in the ruddy light !  
There woman's voice flows forth in song,  
Or childhood's tale is told,  
Or lips move tunefully along  
Some glorious page of old.

The cottage homes of England !  
By thousands on her plains,  
They are smiling o'er the silvery brooks,  
And round the hamlet fanes.  
Through glowing orchards forth they peep,  
Each from its nook of leaves ;  
And fearless there the lowly sleep,  
As the bird beneath their eaves.

The free fair homes of England !  
Long, long, in hut and hall,  
May hearts of native proof be reared  
To guard each hallowed wall !  
And green for ever be the groves,  
And bright the flowery sod,  
Where first the child's glad spirit loves  
Its country and its God !

FELICIA HEMANS.

# EXERCISES ON THE LESSONS.

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*(These Exercises are to be worked under the teacher's direction.)*

## LESSON 1.

1. Make drawings of the Red Ensign and the White Ensign. Colour them with chalks.

2. Make a square of  $2\frac{1}{2}$ " side. Divide the square into twenty-five small squares ( $\frac{1}{2}$ " side). If each of these small squares stands for ten million tons of coal, the whole twenty-five squares will represent the amount of coal raised from our mines in the year 1906.

3. Shade  $5\frac{1}{2}$  of the squares. This shows roughly the amount of coal sent to foreign countries in the year 1906.

## LESSON 2.

1. Make a rectangle  $2\frac{1}{2}$ " by  $2\frac{1}{4}$ ". Mark off quarter inches along the top and one side, and divide the rectangle into ninety small rectangles. Shade one of the small rectangles. This represents the area of the British Isles. The ninety small rectangles represent the area of the British Empire.

2. Find out from the map (page 10) the distance, as the crow flies, from London to (a) Canada, (b) South Africa, (c) India, (d) Australia. Find out how long a fast steamship takes to sail from England to each of these lands.

3. Find the river St. Lawrence in Canada. It is about as far north of the Equator as the Thames in England. The St. Lawrence is frozen for several months each year, while the Thames is hardly ever frozen. Explain this.

## LESSON 3.

1. Copy the little map on page 15. What does it teach you?

2. Write out and learn the following lines:—

"This precious stone set in the silver sea,  
Which serves it in the office of a wall,  
Or as a moat defensive to a house,  
Against the envy of less happier lands ;  
This blessed plot, this earth, this realm, this England."



These lines were written by the poet Shakespeare. He was born at Stratford-on-Avon, in the English county of Warwickshire. Find Stratford on the map (opposite to page 38). How far is it from the nearest salt water?

3. Of what use is the "encircling sea" to Great Britain?

#### LESSON 4.

1. Turn to the map opposite to page 38. With a straight edge of paper find out how far Brighton is from Berwick, as the crow flies.
2. If the railway fare is a penny a mile, how much would a ticket cost from Brighton to Berwick? What change would you have out of £2?
3. From the map on page 34 find out the names of the chief ranges of hills east of a line drawn from the Isle of Wight to the Cheviot Hills.
4. Why are sheep able to eat shorter grass than cattle?

#### LESSON 5.

1. Turn to the map opposite to page 38. With a straight edge of paper find the distance from Carlisle to Plymouth, as the crow flies.
2. From the map on page 34 find out the names of all the chief heights which you would see in an aeroplane flight from Carlisle to Plymouth.
3. What part of the country described in this lesson would you like to visit? Give a brief account of what you would see.

#### LESSON 6.

1. Study the coloured picture on page 29, and compare it with the coloured picture on page 32. Explain why more people live in the country shown on page 32 than in the country shown on page 29.
2. From the map on page 38 find the distance, as the crow flies, from (a) Exeter to Birmingham, (b) Birmingham to Nottingham, (c) Nottingham to Manchester.
3. Of what use is coal?

#### LESSON 7.

1. From the map opposite to page 38 find out where England is narrowest and where it is broadest. What is its greatest breadth? What is its least breadth?
2. What is *chalk*? Limestone when burned furnishes *quicklime*. Of what use is quicklime? When chalk or limestone is mixed with clay it forms *cement*. Find out from your map the parts of the country where you would expect to find many limekilns and cement works.
3. What is limestone? Are any of the buildings in your town or village made of limestone? If not, find out what kind of stone is used and where it comes from.

**Additional Exercises.****1. Estimate the area of England and Wales.**

Turn to the map opposite to page 38. Take a piece of tissue-paper the same size as a page of this book. On it make a border the same length and breadth as that of the map. Measure a distance of twenty miles on the scale under the words ENGLAND AND WALES, and mark off this distance along the top and one side of your border. Now rule lines across the tissue-paper at right angles to the border. By doing this you will divide the space inside the border into squares, each having a side of twenty miles. Each square will therefore represent an area of  $20 \times 20 = 400$  square miles.

Now lay the tissue-paper on the map so that the border which you have made lies on the border of the map. Then count the number of complete squares lying on the land, and estimate the number of half squares or quarter squares occupied by the outlying portions. In this way you will get the total number of squares required to cover England and Wales. Multiply this number by 400, and the result will give you roughly the area of South Britain in square miles. The real area is 58,324 square miles. Find how much you are wrong.

2. In the same way estimate the area of Wales, Cornwall, and Devon, East Anglia, and Yorkshire.

3. Which is the largest English county? Which is the smallest? How much bigger is the largest county than the smallest?

**LESSON 8.**

1. How do we know that Great Britain was at one time joined to the continent of Europe?

2. How do we know that there were formerly glaciers and volcanoes in England?

3. How do we know that in former times England was a very thickly wooded country?

**LESSON 9.**

1. Examine a piece of granite and describe it. Refer to page 45, and find out what granite forms when it breaks up.

2. How was slate formed? In what way does slate split? Of what use is slate?

3. Why is the western part of South Britain higher than the middle and the east?

**LESSON 10.**

1. Explain why the west end of an English town is the best part of it to live in.



2. Why are the eastward-flowing rivers of South Britain longer than the westward-flowing rivers?

3. Draw horizontal lines  $5\frac{1}{2}"$ ,  $5\frac{1}{4}"$ ,  $4\frac{1}{2}"$ ,  $3\frac{6}{8}"$ , and  $3\frac{5}{8}"$ . These lines represent, in order, the lengths of the Severn, the Thames, the Trent, the Yorkshire Ouse, and the Great Ouse.

### LESSON 11.

1. Draw a vertical line 4" long. This represents the number of people in Greater London. Draw another vertical line  $\frac{1}{2}"$  long. This represents the population of Greater Birmingham. Draw a third vertical line  $\frac{1}{3}"$  long. This represents the population of Liverpool. A similar line  $\frac{1}{4}"$  long represents the population of Manchester.

2. Why has London grown so great?

3. Name any well-known manufacturing firms in London, such as Bryant and May, Cross and Blackwell.

4. Name some of the most important public buildings in the city of London.

### LESSON 12.

1. What great drawback has London as a manufacturing city? Find its distance from the nearest large coal-field. Most of London's coal comes by sea, from the ports on the Tyne. Find out the distance by sea from the mouth of the Tyne to the mouth of the Thames.

2. Look on the map and find some of the seaside places within sixty miles of London. Why are there so many of them?

3. What is meant by a "tube"? Why are there "tubes" in London?

### LESSON 13.

1. Chalk hills never form a watershed. Prove this from the map, and give the reason.

2. Draw in outline a small map of England (as on page 48). Mark on this map the "Down Country."

3. Write out and learn the verse of poetry on page 64.

4. Why did the early Britons make their forts on the Downs?

### LESSON 14.

1. Describe how a dewpond is made.

2. Try to find out why there are flints in the chalk.

3. Why is Salisbury Plain a military centre?

### LESSON 15.

1. Why is the Thames one of the most important waterways in the world?

2. How far is Oxford from the nearest salt water?

3. Learn the names of the counties through which the Thames flows.

**LESSON 16.**

1. Describe the coloured picture on page 78. It shows you a lock on the Thames. What is a lock?

2. Why are there no great manufacturing towns in the valley of the Thames?
3. Of what use is the tide in the Thames?

**LESSONS 17 and 18.**

1. Why have Devon and Cornwall produced so many great sailors?
2. What is kaolin, or china clay? How is it formed?
3. Who first discovered the mineral wealth of Cornwall?

**LESSON 19.**

1. How is cider made?
2. Find Droitwich, near the left bank of the Severn, a few miles north of Worcester. (See map on p. 88.) Droitwich manufactures much salt. "Wich" means a brine spring. Find from your map other places the names of which end in "wich."
3. Find, roughly, the distance from Lake Vyrnwy to Liverpool. Why is water brought from such a distance?
4. What is the length of the Severn? and what is the distance as the crow flies from its source to its mouth?

**LESSON 20.**

1. Describe the coloured picture on page 42.
2. Why does the railway from Chester to Holyhead follow the coast?
3. Examine the picture on page 93. It shows you Menai Strait, between the island of Anglesey and the mainland. Find other straits on the map of England and Wales.
4. Draw three vertical lines, the first  $3\frac{1}{2}$ ", the second  $3\frac{1}{4}$ ", and the third  $3\frac{1}{8}$ ". The first line stands for the height of Snowdon, the second for the height of Sca Fell, the third for the height of Helvellyn. These are three of the highest peaks in South Britain. If you were to draw a line on the same scale to represent the height of the highest mountain in the world (Mount Everest, in North India), the line would be 2' 5" long.

**LESSON 21.**

1. What are the four great rivers of the Central Plain? From the map find out their chief tributaries.
2. What other parts of England, besides Evesham, are market-garden centres?
3. Buxton is renowned for its mineral springs. Find on your map the following towns, which also owe their importance to mineral springs:—Harrogate (Yorkshire); Leamington (Warwickshire); Cheltenham (Gloucestershire); Bath (Somersetshire); Tunbridge Wells (Kent).



**LESSON 22.**

1. What do you know about Robin Hood?
2. "The Humber is the second of the three most important river mouths on the east coast." Name the other two. Which is the most important of all? Why?
3. What other rivers flow into the Wash besides the Ouse? Trace the course of these rivers on the map and notice the chief towns on them.

**LESSON 23.**

1. We might call East Anglia "Daneland." Why?
2. On page 37 you will see a picture of the yachts used for cruising on the "Broads." Describe an imaginary cruise.
3. Why did the worsted trade leave Norwich?

**LESSON 24.**

1. Draw a little map of the Pennines, showing the chief heights.
2. Describe the picture on page 51.
3. How can you tell a Limestone valley from a Millstone Grit valley?

**LESSON 25.**

1. Write down the names of nine English towns ending in *mouth*.
2. The following are the twelve largest towns in England: London, Birmingham, Liverpool, Manchester, Sheffield, Leeds, Bristol, Bradford, Hull, Nottingham, Newcastle, and Leicester. Notice how many of them are gateways of foreign trade.
3. Make a list of English towns with royal dockyards.

**LESSON 26.**

1. Describe the pictures on page 119.
2. Find out (roughly) how far a Roman soldier would have to march from (a) London to Leicester, (b) Leicester to Chester, (c) London to Colchester, (d) London to Lincoln.
3. Why have Colchester and Lincoln manufactures of farming machinery?

**LESSON 27.**

1. How far is Bath from London, as the crow flies?
2. Find out how long an express train takes to run from London to York, and from York to Edinburgh.
3. Why is Canterbury and not London the seat of the chief archbishop of the Church of England?

**LESSON 28.**

1. Study the east coast of England. Write out a list of all the important rivers running into the North Sea. (See map opposite to page 38.)
2. Write out a list of the chief headlands on the east coast of England. Notice that a cape is a landmark for sailors, and that it is usually marked by a lighthouse. (See map opposite to page 38.)
3. Learn the names of the counties fronting the North Sea.

**LESSON 29.**

1. Write out a list of the chief pleasure resorts on the east coast of England.
2. Why is the Humber an important gateway of trade?
3. Find each of the following places on the map, and explain why they have the chief wheat markets in England: London, Bury St. Edmunds, Ipswich, Norwich, King's Lynn, Peterborough, and Hull.

**LESSON 30.**

1. Study the south coast of England. Write out a list of all the chief arms of the sea, including the river mouths.
2. Write out a list of the chief headlands on the south coast.
3. Learn the names of the counties facing the English Channel.
4. Southampton has four tides a day and not two. Find out the reason for this. What advantage are these tides to Southampton?

**LESSON 31.**

1. Study the west coast of South Britain. Compare it with the east coast. Write out a list of all the chief arms of the sea, including the river mouths.
2. Write out a list of the chief headlands on the west coast.
3. Learn the names of the counties on the west coast.
4. There is an old saying amongst sailors—"Ship-shape, Bristol fashion." What do we learn about Bristol from this saying?

**LESSON 32.**

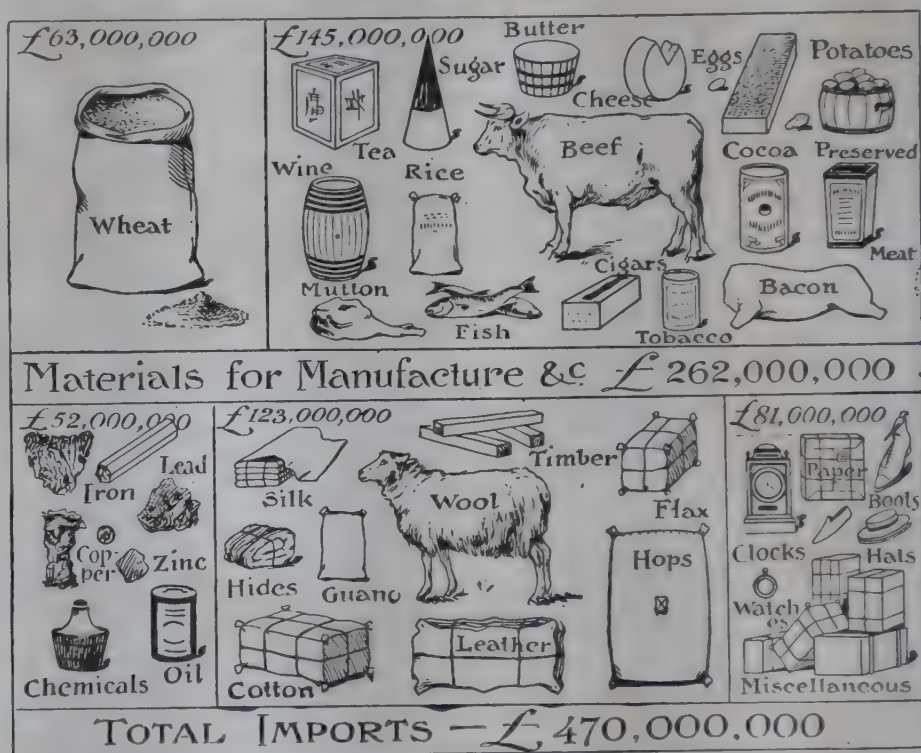
1. Explain why the mouth of the Dee is choked with sand and the mouth of the Mersey is not.
2. Soda is made from salt, and soda is largely used in the manufacture of chemicals. Can you give a reason why Runcorn, Widnes, and Warrington have large chemical works?
3. Soda and sand are largely used in making glass. Find St. Helens, near Warrington. It is an important place for the manufacture of glass. Stourbridge (Worcestershire) and South Shields (Northumberland), as well as several places in the Cheshire salt district, also make glass. Find these places on the map.



as much pasture as plough land. Wheat, barley, oats, root-crops, and clover are grown, but grazing is more important than tillage.

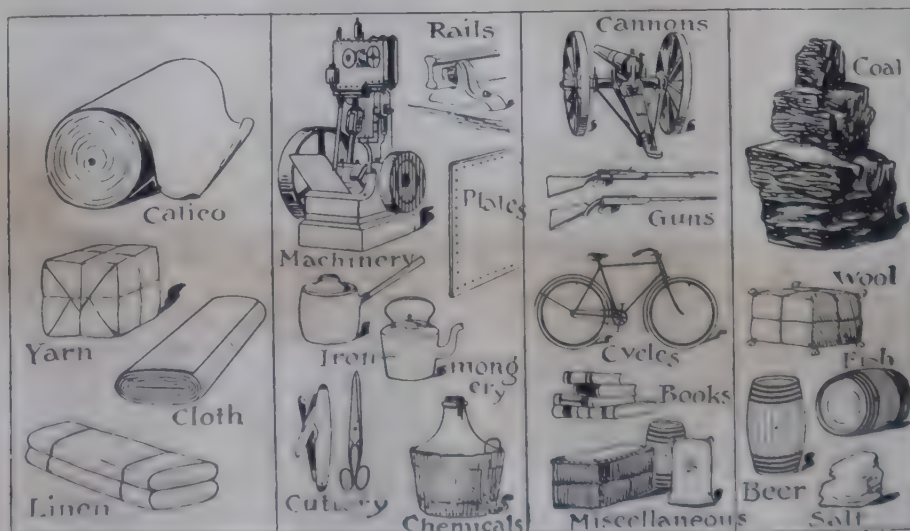
In District V. are many orchards, also in the Devonshire part of District VI.

The western part of District VI., all District IX., and the northern part of District VIII. are almost entirely given over to sheep and cattle.



### Our Foreign Trade.

The first picture shows our imports (goods which we bring in) from foreign countries, and the second our exports (goods which we send out). Write out a list of things which you see in the pictures. What kind of goods do we chiefly import and export?







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